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THE
PEDAGOGICAL SEMINARY.
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EDITORIAL.

In the first article, Mr. Hancock has attempted, after a survey of the literature on child study, to formulate methods of observation that are practical and convenient for teachers to make in schools. He desires to avoid self consciousness; to apply simple determinations of fatigue; to ascertain the state of the senses, muscles, throat, nose; to study and get into rapport with the play instinct; to gauge mental ability; determine interest in history, spelling, reading, arithmetic, language, puzzles, drawing, interests in nature, ideas of right and wrong; and thus to utilize interests in their nascent periods. At the close he gives a brief and representative bibliography.

In the second article Miss Kellor prints results of one of many comprehensive tests she is making, viz.: a study of the association plexus, which she finds instructive in showing the degree of associative memory, mental content and quality of thought, in which respect she compares students, inmates of penitentiaries, and negroes, among whom she finds interesting and characteristic differences.

In the third article Mr. Thurber compares school organization in the United States, England, Germany and France, discussing the advantages of centralization and decentralization, dwelling especially on secondary education and its articulation with higher grades. This is a portion of a Doctor's thesis in Clark University, the whole of which is printed in pamphlet form.

In the fourth article Mr. Bentley discusses in a comprehen-

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sive and judicial way the present status of Latin in secondary schools, and points out the false arguments and assumptions by which its present strange predominance has been attained.

Dr. Chamberlain prints a valuable digest of recent Italian literature of interest to students of childhood from the point of anthropology, psychology and pedagogy.

He also gives an interesting résumé of Professor Mosso's recent book based on his visit to America to attend the Clark Decennial. The volume bears the interesting title, Democracy in Religion and in Science: A Study of America.

Briefer notes on some sixty recent educational publications follow.

THE OBSERVATION OF SCHOOL CHILDREN.

By JOHN A. HANCOCK, Fellow in Psychology.

Much of the success of the lawyer comes from his long continued training in working up cases from first hand knowledge in regard to them. He does not go out from the law school to apply in his practice merely a great deal of theory learned from others, but in every case that comes before him he must also investigate the facts and build from the foundation up. And so in every line that might be mentioned the significance of first hand knowledge to its owner, though its scientific value may be very slight, is so great, is so full of meaning, is so stimulating and so productive of power that it seems strange greater use has not been made of it in the past in the training of teachers. Whether in the normal or in the city system there should be carefully organized courses in the observation and testing of the facts of child life. These should cover a period of several years and should include so far as possible the facts and relations of the phases of growth and development of both mind and body.

One point at a time rather than a series of them should be taken up. Little that is new to the scientific world may be discovered, but the drill in observation, the discussion of the results obtained and the later study of some of the standard literature bearing on the point in hand will do much to make the teacher's sympathy for child life intelligent and to increase it.

As some suggestion for the organization of such a course there is presented in this paper the results of a selection from tests that have been tried in this country and abroad. Some of these have been modified where experience has indicated the need for doing so. It is exceedingly difficult to give proper credit for all of them; indeed hardly any one seems to have thought it worth while to do so. Generally they are traceable to the laboratories of Clark University and those workers who have been trained there, to Binet and his co-workers in France and to Kraepelin and his in Germany.

To be used to the best advantage experiments should stand in some clear relation to the work of the teacher. They should bear upon the difficulties which arise in the every day administration of schoolroom work. Following this plan the writer has always succeeded in enlisting interest.

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Something of an arbitrary order has been followed in grouping, but the physical tests have been given first, because it was felt that logically this field should first concern teachers. In the preliminary meeting with his class the instructor should raise some of the general questions involved, for example the following: Does the growth of children stand in any relation to their ability to do good school work? Can a child when growing most rapidly do as much and as good work as at other periods? How does the growth of the sexes compare? Which does the better work usually? Compare the dull children with the bright ones physically. Attention should be turned back to the childhood and youth of the members of the class by some questions concerning their own periods of rapid and slow growth. Follow the discussion by explanations of apparatus to be used, by some practice in its use on those present and with methods for recording results. Then assign to each member of the section a half-dozen pupils or more whose measurements are to be taken under the immediate supervision of the instructor before the next meeting of the section, which should come some days later. Some of the general laws of growth can be shown in summing up and studying the results obtained, but it is advisable that each teacher repeat these measurements at regular intervals such as other duties will permit. To the student in the normal class should be assigned the duty of giving the same group such incidental teaching as shall be needed during the first year, *e. g.*, A does not succeed well for some days in a given class, or B enters school late, or C has been absent for some reason or no reason for some time; the student teacher should give the help most needed in some study—help which the regular teacher has not time to give.

The literature of the subject under discussion should not be taken up too soon. It should supplement. Something of a bibliography is given at the conclusion of this paper, but for anything complete the reader is referred to Wilson's Bibliography of Child Study.(1)

Similarly one may proceed in other fields after leaving that of physical growth and development.

Records should be kept of the age, sex, grade and nationality of each pupil, and date and time of day when tests were made. Where frequent written tests are made, the pupil should be asked only to write his name. Results should be tabulated with reference to age, sex and nationality. School grades of the same number differ so widely even in the same locality, to say nothing of different localities, that the custom of some good

[1]All numbers refer to corresponding references in the bibliography at the end of this article.

workers of tabulating results by grades is to be regretted. What is most needed are the facts of age, sex, nationality, and peculiarities of individual children.

Special care should be taken that pupils should be studied without their knowledge. It is not often necessary that they should know that any unusual use is to be made of their work. More or less unconsciously they warp the real facts when they know that their papers are to be "studied." Give pupils no preliminary drill for any of these tests, unless directed to do so. Omit no part of a test "because the pupils have had no such work." Ability to do many things often develops without the teacher's aid. Poor papers often have as great value to the expert as the better ones, and the absence of the poor ones may lead to wrong conclusions. As far as possible tests should be made a part of some class work. For this the language and grammar classes are particularly suitable.

It is not attempted in this paper to take up tests applicable to children under the ordinary school age. Many of the tests will not be found suitable for children who cannot read and write.

It is suggested that results for each pupil be filed away in a large envelope bearing his name. Considerable of his work should be thus preserved, for extended study covering long periods.

The use of tact at all times in making tests is a most important condition for successful work. Parents are especially sensitive about the defects of their children and about their being known. All such facts when obtained should be respected and discussed only in the most guarded way.

Physical Measurements.

If possible a room should be set aside in which all of the physical tests can be made and some of the others. Usually it will be found better for two persons to work together in this room. Generally it is well to have more than one child present at a time. This will do much to put them quite at their ease.

The number of physical measurements that can be made is almost unlimited already and the list receives additions with the newly published work of every laboratory of psychology, physiology or pedagogy. However, the very great majority of these are neither desirable nor yet feasible for school children. If it is desired, this work may be gone into in as great detail as the Bureau of Education (2) at Washington has done. The following are the anthropometric and psycho-physiologic data gathered there: "Number of pupil; name; date; school grade; name of observer; sex; date of birth; age in years and months;

color of hair, of eyes, of skin; first born, second born, later born; weight; lung capacity; depth of chest; width of chest; height, sitting height; strength of lift, of arms, of right hand grasp, of left hand grasp, total strength; is the subject left-handed? maximum length of head; maximum width of head; cephalic index; distance between zygomatic arches; between external edges of orbits; between corners of eyes; length of nose; width of nose ; height of nose; nasal index; length of ears, right, left; length of hands, right, left; width of mouth; thickness of lips; least sensibility to locality, right wrist, left wrist; least sensibility to heat, right wrist, left wrist; least sensibility to contact on the skin by pressure of two points, right temporal muscle, left temporal muscle; least sensibility to smell, right nostril, left nostril; least sensibility of muscle to sense of weight, right hand, left hand; pulse; respiration."

While it is very probable that all such tests will some day be made generally, yet it does not now seem advisable for beginners. For the teacher it is worth while to advise measurements of height, both standing and sitting, weight, and such tests of the senses, of fatigue and of motor ability as will enable her to tell when children are incapacitated in any way from the performance of any of their school duties. The abnormal in any of these lines is so likely to produce dullness mentally that the teacher must be watchful concerning them.

All memoranda should show the time of day and weather conditions under which the tests were taken. Fatigue and weight vary a good deal, especially with the time of day and weather. So far as possible the repetition of tests should be made under the same conditions.

Beginning, then, with height measurements, the directions given by Boas, (4) the leading anthropometrist of the country, should be followed: "Height standing: Let the person stand close to the wall in front of the measuring rod. His heels must be close together, touching the wall and he must stand perfectly straight, looking straight ahead without raising or dropping the chin, the head touching the wall. Read off the height of the crown of the head by means of the triangle, pressing one side against the rod, the other against the crown of the head."

"Height sitting: Put a low level seat (for instance a small wooden box) in front of the measuring rod. Let the person sit on it so that his knees are about five inches higher than the seat, which is accomplished by making the seat sufficiently low, or by using a footstool. Let the person sit far back close to the wall, keeping his back erect against the wall. He must look straight ahead without raising or dropping the chin, the head touching the wall. Give the height of the seat and of the crown of the head."

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"The weight is to be taken in ordinary indoor costume."

Fairbanks bathroom scales, which have been carefully tested, are recommended. A carefully graded measuring rod fixed to the side of the room should be used if the portable set of instruments of the Bertillon system are not available. From the height deduct the thickness of the shoe heels. This may be ascertained with a pair of calipers. Get a number of the children to make up at home a complete suit of clothing including shoes, in a bundle, and bring the bundle to school, where it should be weighed. Deduct this weight from the weight already taken. Try to establish something of a ratio between the total weight and the weight of the clothing.

Among the interesting studies which may be made at this stage is the following: Study all of the children of a given age, for example the twelve-year-olds. How many of each are there in the different grades? Compare the height and weight of those in each grade. Does there seem to be any positive fact standing out? Where are the well fed, well nourished, the sickly, the stupid, the overgrown, the best developed physically? How about the school work of each? Do children lose in weight from confinement in the schoolroom?

Broca's calipers or those used in the Bertillon system may be used in taking the principal face measurements. The greatest length and width of the head should be taken on a level with the root of the nose, and in measuring the projections of the face the cephalometric square should be used. The angles are taken with Topinard's goniometer.

The degree of least susceptibility to pain can be studied and approximate results obtained by using McDonald's temple algometer, or Cattell's hand algometer. The instrument is applied to temple or hand, and as soon as the pressure becomes in the least degree disagreeable the degree of pressure is read off from the scale by the operator.

Something of the relative development of the sense of touch may be determined by the use of the æsthesiometer. The subject, with eyes closed, is asked to distinguish when he is touched with one point or two. The distance at which the two points of the instrument are thought to be one is noted.

The threshold of just perceptible touch is determined easily by Scripture's set of touch weights.

The effect of sight on the judgment of weights is studied with a series of weights of exactly the same weight but differing in bulk. Children are asked to arrange the weights in the order of their weight.

No investigator abroad is more fruitful in devices for studying children than Binet. His "L'Année Psychologique" (6) is

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a storehouse of them. He studied control and strength of the large muscles, by noting the ability to climb a rope of a thickness suitable for the hands of children. Results were tabulated according to the distance climbed, using hands alone, and also the distance using both hands and feet.

He also tested for quickness with large muscles by having each child of the school run, in the presence of its mates, over a twenty or thirty yard course.

A great many tests have been made for vital capacity using the spirometer. Its value has been severely criticised and it may be ultimately rejected. Binet, fearing it on hygienic grounds made use of a new device to get some idea of the vital capacity of the school children. He measured this by the distance at which they could blow out a wax taper. At what maximal distance could this be done? On a table a scale of distance was marked, and an upright bar placed at the height of the pupil's chin, so that he could not lean beyond this. He was then given a number of trials till his maximal distance was shown. In connection with any lung power test take the measurement of the lungs with a tape line. Measure first with the breath expired as fully as possible and then with the lungs filled. Measure just under the arm.

The chronoscope is used for measuring reaction time. Generally it will be necessary to get as inexpensive a one as possible. Of the less expensive the Vernier is perhaps the most satisfactory. Scripture's is also very good. The question with this is how quickly can a child react in response to a given signal either of sound, sight, or touch. A somewhat complicated device is necessary if reaction and choice are to be tested at the same time.

The dynamometer is used in measuring the strength of grip. Smedley's, (7) which is adjustable to the hands of children, is preferable. Scripture's and Binet's each give some measure of the strength of the great muscles of the body. Several trials should be given always. The hands may alternate with the hand dynamometer. Record all of the results, not only for getting the maximum grip, but also for the number of efforts necessary to do the best. The larger instrument is also adjustable to the height of the pupil. These tests like many other of the physical tests are also used in fatigue studies.

Fatigue.

Among the many factors that must be considered in the successful organization of school work is that of children's susceptibility to over-fatigue. There is a degree of fatigue that is normal and unobjectionable. One tires from his day's work, but he knows that he will be quite able to resume work on the

morrow and that he will doubtless sleep better and have a better appetite for having been fatigued. The abnormal phase cannot be passed over so lightly. It appears when work has been too long continued for some time, varying with the individual. The night's rest leaves one feeling more fatigued than on the evening before. It takes some time to throw this off. There may be sudden muscular movements without the person being able to prevent them, twitchings of hands and face or eyes, lack of ordinary color in the face, shaky writing, inaccuracy of ordinarily well done work, irritability of temper, dullness in the recitations, poor memory for the time being, dulling of the senses, sleeplessness and nervousness. The degree of over-fatigue is shown to a great extent by the number of these symptoms present.

It is possible for each to work out a certain order of duties and rest periods in order to get the greatest amount of work done for each day. This will be found to vary to some extent with the season and weather as well as health.

In studying the order and amount of work which should be exacted of each child the problem is further complicated by the fact that growth and development have not ceased with them and that they are also irregular. Among the general questions to be considered are:—How does susceptibility to fatigue vary with the season and weather? There is generally a year in the early teens when both sexes fatigue more readily than in the years immediately before and after. What allowances should be made for this? Was there such a period in the life of the students? Do children when growing rapidly suffer more from fatigue than at other times or less? Do boys or girls fatigue the more readily? To what extent ought rapidly growing children to be chided for laziness?

General observation and practice have done something in determining the order of the school programme with reference to fatigue, but the programme is by no means scientific. Thoughtful study will do much more. What can you say about the following problems?

To what extent should the same programme be followed daily? What is the best time of day for each class? What should be the order and frequency of the recesses or of the "physical training?" How long can a class be held on the same subject to advantage? How does interest in a subject affect the readiness with which fatigue appears?

But there is a factor quite likely to appear in a study of fatigue in the pupils, that may wholly change results in unexpected ways: The teacher—her health, nervous condition, amount of sleep she has had the night before, whether she exhausted herself by working too late or by having "too good a time" or not.

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The work of Dr. Hodge on the changes in nerve cells due to fatigue led to a great deal of study of fatigue, and Galton shortly after gave these four tests for detecting it in its incipient state:—The length of time during which neatness of execution can be sustained in performing a prolonged task; promptness and sureness of memory in simple things; common sense arithmetical problems; and reaction time.

One class of investigators, following the lead of the Russian alienist Sikorsky, have made their tests center around dictation exercises, and this indeed has many advantages. No special apparatus is necessary. Dictation work is so common that the effect of practice would be too slight to affect the results. Dictation of work in different branches of study may also be given. Further, it is easy to sum up results.

Using this method the following is suggested, and others can doubtless be devised: Have the pupils copy from dictation just before and after each recitation during the day. For each dictation select a half-dozen sentences, each of which shall be from one of the school text books and shall have twenty-five syllables in it,—at least the same number of syllables. The percentage of error as it varies during the day, how affected by recesses as well as recitations, and the length of time taken for each dictation will be among the points of interest worth studying. Should "physical training" be a part of the daily programme? Compare results before and after with those before and after a recess during which the children have engaged in moderate plays and games. Study the phrases, words and letters with reference to any omission of each, change of place of word or letter, insertion of word or letter not dictated, substitution of word or letter not dictated, or of one for another, and finally the doubling of a letter or not doubling it as was right. This study may be abbreviated by making but two or three tests during the day, or it may be varied by making the test once or twice a day during a week at the same period each time.

Another group of investigators have experimented with the addition, subtraction and multiplication of simple numbers. These have arranged their work very much according to the plan suggested by Kraepelin in an article translated for the Pop. Sci. Mo. Vol. XLIX. Although he is speaking particularly of mental ability, what he says applies to the testing of fatigue. Adults are evidently in mind and the test needs to be abbreviated to ten, fifteen or twenty minutes work for children, according to grade. He says:—"The measure is afforded by determining the number of small, similar problems resolved by the subject in a given time—such, for example, as numbering letters, reading, the learning by heart of a series of numbers or syllables,

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and the continuous addition of columns of numbers. In the last mentioned the person under trial is set to adding figures ranged under one another, in a book printed expressly for that purpose, for a considerable time, without stopping under some circumstances for several hours. When the sum reaches a hundred, the hundred is simply carried on and added to the excess in units. A bell sounds every five minutes, when the candidate draws a line after the last added number. At the end of the trial it is easy to determine how many numbers the person can add every five minutes."

It is not to be expected that one will make more errors the longer he works. For a time at least the number of errors may show a decrease. Effectiveness increases for a time generally as one warms up for the work in hand. Spurts of ability are to be expected as well as intervals of fatigue greater than others.

This test has also been tried frequently :—Having all of the pupils start at a given signal let them make as many figures of a given kind, *e. g.*, 6's, during a period of two minutes. Compare the number made at different times during the day.

Similarly have a series of pages in their readers in mind and let them count the letters in the first ten lines on any one given page, sending them to a different page each time.

Have results handed in each time with the name of the pupil written on the slip of paper.

In the arithmetic work note carefully the effect of practice on the amount of work that can be done in a given time. This amount ought to show interesting changes during the year, particularly during the winter and spring months.

The ergograph has been the instrument used by yet another group of students: led by Mosso. (8) (9) Where apparatus is available it is very desirable to have this instrument. A two-minute test with this at set intervals during the day will show interesting variations of power. The curve for each individual will be tolerably constant but will show modifications due to health and fatigue.

Similarly the dynamometer may be used in fatigue studies as well as the tremograph, æsthesiometer and chronoscope. Griesbach with the æsthesiometer tested the sensibility of the forehead, cheek, ball of thumb, end of the index finger, tip of the nose and the underlip. The value of this test is seriously disputed by Leuba and Bolton. It is to be expected that considerable variation in sensibility to touch, steadiness of control, degree of strength, and reaction time will appear with season, health and fatigue.

Binet and Henri report other tests principally important in showing a number of changes which accompany mental activity,

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but which may also be used to test for fatigue; the rapidity of the heart beat, the capillary circulation, the blood pressure, the temperature of the body, the number and shape of the respiratory beats, automatic muscular action and changes in nutrition. These cannot well be made in the schoolroom, though some of them the teacher can note in her own case.

Nervousness and Chorea. (11) Tendencies toward nervousness and chorea are very common among American children. One should early learn to use these and keep close watch for them in those children who are in the kindergarten and in children who are taking instrumental music lessons. Repeat these tests at intervals of six or eight weeks on these children.

Sense Tests. Mental brightness or dullness is closely associated with physical conditions. Sense defects show themselves in some mental deficiency, and the defect remedied the mental condition at once responds. It is very important to know what pupils have any sense defect of consequence and to make due allowance for it. It is not expected that the teacher shall have the skill of the physician, but that she shall be able to tell whether or no any serious defects exist and something of its nature. It is not well to make close enquiries of pupils concerning symptoms. Suggesting symptoms is a sure way to get them among children in great frequency.

The Eyes. One easily sees those children whose eyes show some inflammation or suppuration of the lids, those with the strained look characteristic of weak eyes, and those who hold the book too near the eyes when studying. Those with the suppurated eyes should be sent home for treatment. There is likely to be contagion in the condition.

Have a test in copying work from the board. Write for the children on the board a few sentences in a hand large enough for them to read easily. Have the sentences copied. Note the papers. Are there any serious mistakes? Make a list of those children who have failed seriously. Of course children who cannot read and write cannot be included in this test Add to the list any who are particularly inattentive in work. Visit the homes of these children and learn all that is available concerning the peculiarities of the children. Give or send to each parent or guardian a copy of the following general letter. It is adapted from those used by Principals Atkinson and Scudder.

Locality, ...Date, ...,

To M..... .....:

Dear .....:

We shall be glad to confer with you from time to time and to receive from you any information in regard to your.....

especially of h..... interests out of school, that you may be willing to give us. Your replies will be treated as confidential if you so desire. The information will be used by the school authorities only, and is asked for in order that we may be able to do our best possible for the children under our care.

You will greatly oblige if you will fill out and return this blank within a week.

Name of pupil, Date of birth,

Condition of health during the past year or two,.....

Tendency to or frequency of headaches, ...

Is eyesight, hearing or throat defective in any way of which you know?

How many hours sleep does.....have?

Does.....take time enough to eat a good breakfast and dinner each day before coming to school?

About how much time is spent each day in recreation and exercise?

Mention any injurious effects that seem to you to be traceable to school influences or requirements.

On returning from school is there any headache, nervousness, fretfulness or low spirits?

Does this appear more marked at the end of the week? (If so, and it becomes more noticeable by the end of the month, we hope that you will inform us of it.)

We regard care of the health and the development of a strong physique, especially with girls, as far more important than study. Considerations of health, therefore, should always come first; but health, permitting of good hard study, is one of the cardinal virtues of school life. This involves the problem of diet, regular hours of sleep, a minimum of excitement—parties, etc.,—plenty of recreation and a reasonable share for both boys and girls in the duties of the home, and some regular home study after the sixth grade is reached.

Your cordial co-operation in the work of the school is solicited.

Yours very truly, ——— ———.

Parents easily overlook defects seen every day. Study your returns carefully for any children that appear to you to have serious defects not mentioned in the filled out blanks. It is possible for the teacher to determine some sense defects not reported unless the children have been examined by oculist or aurist.

Get Snellen's (12) test types or Queen's. The use of either or both of these is advisable. Both should give the same results, and it will be well to check against possible error while learning to use them by using both with a number of children at the same sitting. It must particularly be borne in mind that the

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cards should be kept out of sight when not in use. Children quickly commit the lists of letters and give them whether they see them or not. For special use with illiterates, and with children too young to read, use one of the Snellen cards on which the letters are all E's but so placed that the letters face in different directions. The test consists in being able to tell in what direction the letter opens. Whatever card is used it should be hung in a clear light.

The following is Dr. Allport's (13) blank used in his tests made in the Minneapolis schools. It is worth following.

" ..... Public Schools.
Date, ... School, ...
Principal ..... Examiner .....

INSTRUCTIONS FOR EYE EXAMINATIONS.

The examination should be made privately and singly, in a room apart from the general school session.

Ascertain whether the pupil habitually suffers from inflamed lids or eyes. Children already wearing glasses should be tested with such glasses properly adjusted on the face.

Place a card of Snellen's Test-Types on the wall in good light; do not allow the face of the card to be covered by glass.

The line marked XX (20) should be seen at 20 feet, therefore place the pupil at 20 feet from the card.

Each eye should be examined separately.

Hold a card over one eye while the other is being examined. Do not press upon the covered eye, as the pressure might induce an incorrect examination. Have the pupil begin at the top of the test card, and read aloud down as far as he can, first with one eye and then with the other.

If the pupil does not habitually suffer from inflamed lids or eyes, and can read a *majority* of the XX (20) test type with *each* eye and does not, upon inquiry, complain of *habitually* tired and painful eyes or headache after study, his eyes may be considered satisfactory; but if he habitually suffers from inflamed lids or eyes, or cannot read a *majority* of the XX (20) types with each eye, or habitually complains of tired and painful eyes or headache after study, a card of information should be sent to the parent or guardian.

Please examine your entire school by this method, but only such pupils as are thought necessary to send to an oculist need tabulation in this blank. May the first, of each year, please complete this report and send it to the superintendent of schools, and a duplicate to the board oculist. This will afford you an opportunity to examine your pupils, to note whether they follow your suggestion with regard to consulting an oculist, and if so, to observe the effect upon the pupil's conduct, health, ap-

plication to study, etc., which you will please carefully but briefly note in the proper place in this sheet.

First grade children need not be examined.

Number—Name—Sex—Age of pupil.

Does the pupil habitually suffer from inflamed lids or eyes?

State the number of last line seen by pupil with right eye. Same for left eye.

Do the eyes and head habitually grow weary and painful after study?

Did pupil consult an oculist and follow advice?

Describe briefly the results of the treatment."

Astigmatism, where it is at all abnormal, is a frequent cause of headaches. Snellen has a card for testing this. Follow the directions already given as to distance (twenty feet from the card), and test one eye at a time. It is especially necessary in this to avoid the suggestive question. Remember that there is a normal astigmatism.

Ask the pupil to begin with any line on the card, follow the lines around and describe their color to you. Ask him next to tell how distinct the lines are. A slight change in color—apparently to brown—is of no consequence, but if this is very marked and the lines in places seem to be blurred it is a case to be referred to the oculist. To attempt school work with eyes seriously astigmatic means much suffering to the pupil and work much delayed, with often the charge of stupidity against him.

Queen's card has certain advantages and has full directions printed on its back for its use.

There is another defect sometimes found which is a defect in the muscles moving the eyeball. There is difficulty in focussing both eyes on the same point. Pupils so troubled do especially poor work in reading. They are likely to insert a word not in the text or to omit some of the words. While one eye is on the line in question, the other, which is more or less disregarded, brings occasionally into the field of consciousness words from some other part of the page. This may also show itself in a confusing of the order of the letters in trying to spell a word from the printed or written page. Such cases need medical attention. Extreme nervousness is pretty certain to be present also.

Color Blindness. This is not so serious a defect as are the others mentioned, but a knowledge of its presence may save embarrassment and account for certain failures in map work and in art work. For its exact study Hering's apparatus is recommended by Titchener. For general school purposes the Holmgren wools are satisfactory. These are skeins of different colors, first, three standard test colors—light green, pale purple,

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and bright red; then other skeins of different shades. Scripture's (14) directions for this test are as follows: "The light green skein is laid before the person tested and he is told to pick out of the heap all colors that are like it. Nothing more is to be said; names of colors must not be used. If he picks out grays, brownish grays, yellows, orange, or faint pink, as the same, he is color blind. Now the purple skein is laid before him. If he picks out blue or violet as the same he is red blind; if he selects only gray or green he is green blind. As a clincher the red skein is used. A red blind person will match this with dark greens or dark browns, while the green blind person will choose light greens or light browns."

For the study of color sensitiveness the Maxwell color-top is good. By means of this the exact percentage of another color necessary before its presence can be told can be determined. One adjusts with whatever shades are to be tried.

Hearing.(16) Defects of this sense are very common. Many children conceal them by shrewd guessing and carefully watching the person speaking. Those pupils in need of some exact test may be sifted out by some trial tests. It is always safe to place in this list the inattentive and dull. Ask the pupils to take pencil and paper and write what is dictated to them. Make no explanation of your reason. Select a paragraph from one of their text-books. Stand behind them and read in an ordinary tone of voice such as you use at other times. Read for five or even ten minutes. Gather the papers and note those who have made mistakes in any great number. Later in the day or during the immediately following days step behind these placed on the list and make some request in an ordinary tone of voice taking care to speak the name of the pupil last. In this way it is possible to select those who are depending a great deal on the eye to help them in determining what is said to them.

There is such a thing as being able to hear only certain sounds well, and of being able to hear only by straining the ear constantly. Again, hearing may be somewhat intermittent. Such difficulties account in part for the difficulties which some have in learning to spell.

It is well to test for what is called sound-blindness. A distinguished Boston aurist gives the following list of words for making this test:—fan, log, long, pen, dog, pod, land, few, cat. Give each pupil a slip of paper. Stand in the back part of the room and pronounce these words; pronounce each but once. Using this list Miss Wiltse selected eighty-four pupils in an eastern school as being tone-deaf. The aurist then tested them with more exact means and found that the word test had failed on but four.

There are tests which may be made in determining the distance at which the whisper, or a watch, or a tuning-fork may be heard. They are offered by good authorities, but these tests, except perhaps the whisper, do not seem free from sources of serious error. The tests already mentioned are sufficient to tell the teacher who her defective pupils are, and something of the nature of their defects, and this is all that is necessary for her to know. If more exact results are desired Seashore's audiometer (17) should be obtained. The audiometer especially useful in determining the possibility of giving the child a training in music. The claim so often made that any child can sing if it will but try is not founded on fact, as Seashore's work so clearly shows.

The Throat and Nose. Closely allied to ear troubles are disorders of throat and nose.(18) Here, again, it is the stupid, the dull, and the inattentive that should be in mind. "Adenoid growths" often clog the nasal passages, making it more or less difficult to breath through them. Nervousness, dullness and headaches result. The tonsils may be diseased or enlarged. Select pupils who breath through the mouth habitually. Take opportunities when they can be spoken to alone. Ask them to close first one nostril and then another. If they cannot breath through the nose readily advise them to consult their physician.

Motor Tests. In the study of the motor ability of children Bryan's classic work is still easily the leader. This, like others of the same class, was undertaken for the purpose to get something of a scientific basis for the school room work involving the muscles,—drawing, writing, manual training, kindergarten employments, etc. Bryan(18) studied the normal rates of movement of all of the joints of the upper extremities by means of a telegraph key with a clockwork registering apparatus attached. He tested the precision of movement in children by means of apparatus which he describes as follows: "Strips of platinum foil were pasted smoothly on plate glass so as to make an angle of 2½ degrees. A small steel needle set in a common wooden penholder, served as stylus. Three to four La Clanche cells constituted the battery. A telegraph sounder gave the signal when the needle touched the platinum." Each child witnessed others working before his turn came. Seated before the apparatus he was given six trials with each hand in the effort to move the pen as far up the angle as possible without touching either side. Bryan further tested precision by asking them to try when seated at the table to put a pen in a hole a milimeter square, the arm being held about a foot above the hole.

Another test for accuracy is that reported by Bagley.(19) It

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is a variation of the old game with bean bags. "A recording target was mounted upon a table, the target being inclined backward to make an angle of 45 degrees with the table top. The target consisted of a wooden frame with a solid back, the frame being fastened to the back by means of hinges. Into this frame a sheet of paper was inserted having marked upon its center a black bull's eye 10 mm. in diameter. Behind this was a sheet of carbon paper and a sheet of record paper upon which the impressions were preserved. The subject was placed two meters away, facing the target, and was prevented from moving nearer by a movable upright. He was given 10 marbles and directed to toss them one at a time, attempting to strike the bull's eye at each trial."

Among other tests of this kind worth trying may be mentioned the following: Test accuracy of touch by placing before children a card on which are arranged rows of dots, the dots in the same row standing at equal distances but the distances varying with the rows. In this a pen may be used, but the arm should be held free above the table.

Arrange series of points, some three, some four, and so on up to even six or seven inches distance apart. Test the ability of the children, holding the arm free from the table, to connect these points.

Rapidity of movement may also be tested by the use of the device already mentioned,—all trying during two minutes to see how many 6's they can make.

In studying results compare the ability of the bright pupils with the duller, and the boys with the girls,—children of one age with those of another. Does there seem to be any period when ability to do exact work increases more rapidly than at others? Do there seem to be any periods when power is lost? Note these points also with succeeding tests.

Some years ago I became interested in the adaptation of the work of the kindergarten to the the motor ability(11) of young children, and gathered and used in Worcester a number of tests. Among them were the following: Ask the child to stand with his feet close together and hands at sides. Is there any swaying of the body? Try the same with the eyes closed. Is there any difference? Have him walk across the room backwards with eyes closed. (Keep near him to prevent falling.) Is there any dragging of either foot, walking with the feet apart, or turning to right or left? Have him try to sit still a half a minute exactly. Note all of the efforts that he makes in doing this. Does he hold his breath? It was thought that these three would show in some degree some facts concerning the relatively incomplete control of muscles which children have. The fourth test was Warner's (11) test for nervousness. It is

as follows: Ask the child when you have him alone to close his eyes and hold out his hands horizontally with palm of hand vertical, with fingers spread. (Show him how.) Is there tremor or twitching of the fingers? Which ones, and in what directions? Is it slight or distinct? The following is Sturgis's test for chorea—St. Vitus Dance: "The hand test is infallible and may be thus applied: Bid the child to hold up both hands open, with extended arms, the palms toward you. If that is done steadily, both hands upright, and both alike, no finger or hand quivering, no falling back of either hand, nothing to choose between the positions of the two, then the child has not, nor is it near (either before or after) St. Vitus dance. You may confirm this test by another. Let the child place the open hands upon yours palm to palm. Look then at the back of the child's hands, observe whether fingers or thumbs (especially the latter) repose without tremor and without restraint."

For some study of ability to use the finer muscles exactly the following questions were asked, and many of the tests tried: Does the child dress himself? Button clothing, and fasten hooks and eyes? Can he tie the ends of a string together? In what kind of a knot? Can he thread a needle? How small a one? In which hand does he hold it? Can he interlace slats of paste board? Try him with four and with six. If he does not succeed show him how once, and then see if he can succeed. Can he wind thread on a spool? How does he do it? Can he spin a top made of half a spool or of a button mold? Can he snap a marble? Can he hop on either foot? Stand on tip-toes or heels? Can he hop on each foot? Make some simple pattern of blocks composed of eight square blocks. Can he imitate the pattern? Count and beat time, double, treble, quadruple. Can he do it? Rapidly? Can he march, keeping step as you count time or play for him? Can he run and keep time? Does he when marching, move head, mouth, eyes or tongue? Pat the top of your head and at the same time move the other in a circle on your breast. Can he imitate you? Rest your forearms on the table, the hands in an easy position with the fingers curved, and the lower parts of the palms and the tips of the fingers touching the surface of the table. Begin tapping, letting the movement proceed rapidly from the little fingers to the thumbs. Ask him to imitate you. Notice the movements that he actually makes. Are they with the hand and arm moving together from the elbow; the whole hand moving from the wrist; all the fingers moving in unison from the knuckles; or with index finger alternating with the other three? Reverse the tapping beginning with the thumbs. Can he imitate you any better? Just what does he do? Can he drive a nail or hit it squarely after several trials

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when started for him? Can he roll a hoop? Skate? Turn a summersault or walk on his hands? (The boy of course.) What movements seem to you to be the most difficult to learn?

The control of the large muscles may be studied to advantage by the use of Bullard's and Brackett's ataxiagraph.(20) By means of this the involuntary movements made in the effort to stand perfectly still are charted. Jastrow's automatograph I have made a good deal of use of in studying the control of the large muscles of the arm. Results with this are similarly charted on smoked paper. For the study of the exact control of the finer muscles of the fingers I have used Bullard and Brackett's ataxiagraph. Binet and Delabarre have both devised excellent ataxiagraphs. In these studies compare the power of children with that of adults. Does there seem to be any law of the order of development of control?

The Plays and Games of Children.(21) This is a field which has been allowed to grow up with very little care from the teacher. The play ground should concern her as much as the recitation. It affords opportunities that are unlimited for moulding character. It is wise to be a careful student of plays and games and to have at hand some of the better literature of the subject.

There is not in this country that settled condition which has led to something like the established order of plays found in other lands. There are, however, strong tendencies toward this. Something of this may be noted by keeping memoranda during some months of the plays the children themselves start. When some such data have been secured study it with reference to the character of the plays. There is some special element in each, some preference due to season, weather, disposition, or sex. One should recall his own childhood favorites and that of friends.

For a language lesson or "composition" lesson the children may be asked to write all of the plays and games they know, stating those they like and why, as well as those they dislike and why, and what time of year they think each should be played.

For another exercise they may write their answers to this list of questions: What games have you or your friends invented? Describe each. How long did you play them before giving them up? To what extent did other children imitate you? What do you play, and how do you amuse yourself when you are alone? When you have one, two or more playmates? What do you do for evening amusements? What games do you think suitable for Sundays? What else do you do to amuse yourself? What playthings have you made? What toys do you like best? What ones have you quit playing with?

Even boys like dolls, though they would feel disgraced to own it. Their liking for them is pronounced at some period, and later it changes over to some other form like brownies. See what can be done with this. "You may write all you can about dolls. Tell why boys dislike them. Did you ever know boys to play with them? Or with brownies? How old were these boys? What kinds of dolls do you know children to have? Do they ever play that they are sick? What diseases do they play that they have? What medicines do they play that they give them? How do they manage to get some one to play doctor for them? Do they ever play funerals with them? How do they play it? Do they ever play doll parties? Tell how it is played. What is done with dolls at night? What kinds of dolls are liked best?"

Most children have at some time made some collection, stamps, buttons, cigar tags, etc. For a language exercise ask them to answer the following: What is your collection? How large is it? When did you begin it? How long have you had it? Where do you keep it? What are you going to do with it? What made you think of making it? Why do you like it? Did you ever have any others? What became of them? Which was your favorite? Why?

Mental Ability.

It is worth trying to test as exactly as possible this power in different lines. The teacher is interested in knowing how rapidly any given kind of work can be done to advantage by each child, what his rate of improvement is, his power of retention, his susceptibility to fatigue and capacity for recuperation, how long after beginning a given piece of work before he can be doing his best, his tendency to work best by spurts, the degree to which he can concentrate attention, and the peculiarities of his memory. Individual psychology is largely the field here, and there is now a marked pushing in that direction. All of these factors just mentioned are important in determining mental efficiency. No one test is exclusively mental, hence the great difficulty in attempting an exact classification.

What is the range of children's knowledge at the time when they enter school? What can they do? The significance of this problem was grasped by a German investigator who published in 1869 the results of an investigation on this subject. Shortly afterwards President Hall (22) elaborated a series of questions which were given to Boston children. These questions bore on what children had seen of animal life in its normal environment, what they had seen of both country and city life, where all they had been, what all they could do, what stories they knew from the Bible and other sources, what phe-

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nomena of the heavens they had noticed, with what of plant life they were familiar, what knowledge they had of their own anatomy, what geographical, arithmetical, and geometrical concepts they had, of what trades they had some notions, of what sources of food supply they had some idea, what time relations they knew, and what knowledge of minerals they had. This study has been repeated with a good deal of profit. All of these points could be taken up in primary language classes and discussed with the children, one point often sufficing for a single recitation. It is suggested that early language training should *not* include written work.

Get clearly in mind what is meant by eye-mindedness, ear-mindedness and motor-mindedness.(23) Try the following on some acquaintances out of school, and note the difference in mental habits shown by the results. The list is one published by Columbia University, and is evidently largely borrowed from Galton. "Think of your breakfast table as you sat down to it this morning; call up the appearance of the table, the dishes and the food on it, the persons present, etc. Then write answers to the following questions: Are the outlines of the objects distinct and sharp? Are the colors bright and natural? Where does the image seem to be situated? In the head? Before the eyes? At a distance? How does the size of the image compare with the actual size of the scene? Can you call to mind better the face or the voice of a friend? When "violin" is suggested, do you first think of the appearance of the instrument, or the sounds made when it is played? Can you call to mind natural scenery so that it gives you pleasure? Music? The taste of fruit? Have you ever apparently heard a voice or seen a figure when none was present? To these could be added such questions as, How do you remember music best? By "ear?" By the appearance of the printed score? Or by the rhythm of it? How do you proceed to commit anything to memory? Do you easily remember quotations, dates, and isolated facts?

Children as well as adults use different methods. To one the appeal must be made through the eye, to another through the ear, another must have a carefully arranged logical explanation, another must go through the development of the whole argument, writing it out. A knowledge of the peculiarities of each will be of service in every class in the school. The following test was arranged by Kirkpatrick, who evidently adapted it from Binet. Take thirty names of common objects and arrange in three lists as follows, care being taken not to group together words commonly associated: I. box, desk, thumb, chair, cap, broom, sock, bird, axe, post; II. door, stool, slate, rug, hinge, corn, peach, shoe, hat, watch; III. pen,

spoon, pencil, knife, shears, spool, bottle, thimble, spectacles, book. Make the test beginning with the third primary grade. Pronounce the words in the first column at the rate of one every two seconds. Having already placed on the board and covered the second list, now uncover one every two seconds, erasing it after the pupils have had a chance to look at it during that time. Instead of the words in the third list show the object itself at the rate of one every two seconds. At the close of each list ask the pupils to write as many of the words as they can remember. Three days later ask them to write as many of each list as they can recall. I think a fourth list might be added which should be read to the pupils, and which they should pronounce and also write. This list could be of objects for one test which they could also see. It will be of interest to note the facility with which a list of this kind will be remembered as compared with any of the foregoing. Kirkpatrick also offers this: Give orally the following lists of words asking the pupils to think of the sound represented by each of the words in the first, of the visual appearance suggested by the words in the second, and of the objects named in the third: I. loud, bang, whisper, boom, splash, hiss, buzz, whiz, tinkle, ring; II. black, sparkle, yellow, red, gloom, bright, green, white, shadow, pink; III. rat, spade, sheep, rake, nest, mouse, leaf, hen, cat, coat. Compare results.

While it is not desired that the use of one sense shall take precedence over another exclusively, it is yet often necessary to appeal to that sense which seems to have been used most by the pupil.

Tests of the nature proposed by Kirkpatrick may be supplemented by those in which numbers are used instead of words. The following has been used at Columbia University: "Each series of numerals in the following is read at a rate of about two per second, after which the student writes it from memory: 4 8 3 7 1 9 6 2; 7 5 9 2 6 6 4 1; 3 7 5 2 9 6 4 8. Expose the following at the same rate: 3 5 9 2 6 8 1 4; 8 5 2 7 4 6 2 1; 5 1 6 2 7 3 4 8." Try this list and have the students pronounce each as you uncover and at the same rate: 6 3 5 1 9 4 8 7; 3 9 4 8 4 7 1 2; 5 4 8 3 2 7 5 0. After each series have the children write all they can remember of the series. Devise a series and combine as many methods as possible and compare results. Suggestions as to methods in spelling classes should grow out of experimenting of this kind.

Different still is the device used by Binet (25) and Shaw (26). Read a short story. Ask the children to try to write as much of it as possible in the exact words of the author as possible. or select a series of sentences of different lengths and read.

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Then ask that the children write as many as possible, using the exact words of the author as far as they can, but trying to give the sense of what was read. The results can be studied with reference to ability to remember exact phrases, the length of the phrases remembered, their character, etc.

A test suggested by Binet (6) seemed to him to bring out types of mind existing among the pupils. He showed them copies of a picture representing the story of La Fontain's fable, The Laborer and His Children. Two minutes were spent in the study of the picture and then ten were taken in writing a description of it.

The "descriptive type" took account of the most apparent characteristics without attempting to sieze their significance. Many described the photograph as if it were dead nature. The "observing type" fixed attention principally on the subject of the scene; they described it as a living scene. They put a story in it, or rather saw the story in it. The "emotional type" had the characteristics of the "observing type," but also saw the emotional elements in the scene. The "erudite type" simply résuméd the story.

Other pictures could be tried—those which represent a story which the children have heard, and again those pictures which are wholly new to them. The description of these would give a place for the exercise of the imagination and an opportunity to note its peculiarities in the children of the school.

Binet also placed a watch before the school and asked the pupils to describe it. He classified the sentences under the headings of description, observation, imagination, moral reflection, erudition, emotion—both the pure and the simple, and esthetic emotion.

How many things can a child hold in mind and deal with at one time? Are not many children confused with the long and involved explanation merely because of its length? Do not many fail with arithmetic work merely because of the number of details in the "example?" Careful every-day observation will do much to mark out this limit for each. Remember that drill within the limits of power with opportunities to show when the limit has extended, is an advisable method of procedure.

Bolton's (27) experiment in this field was made as follows: "A series of numbers in which the digits were so arranged that they did not stand in their accustomed order and no digit was repeated, was read before each class to be tested, on four different occasions." "The digits were dictated slowly at intervals at about 2-5 of a second with care to avoid rhythm or grouping; and at a given signal after the dictation of each number was finished, the pupils wrote the digits as they re-

membered them." Numbers of five, six, seven and eight digits were given. The results were studied with reference to the number of digits which could be grasped at one time.

Some evidence of a law of forgetting will likely appear if the character of the mistakes made is closely observed. Where confusion in writing the digits occurs, in what part of the number is it?

Bolton's test appealed especially to the ear memory for numbers. It would be of interest to repeat it by an appeal along different avenues already suggested.

The following (6) cannot be tried to advantage on the entire school at once, but presents some interesting phases. Select a number of ten different digits, *e. g.*, 9718025361. Allow the pupil to look at the number for five seconds, then let him try to reproduce it. He will likely fail. Let him try again. How many times must he be shown it, and how many times does he try before he can write the entire number from memory? Binet found wide differences in this between the ability of the bright and dull to do this. It is one of his tests for detecting the dull pupils.

How great is the ability of a pupil to fix attention (6) on any given things? The answer to this question will perhaps be difficult to obtain. All work is to some extent an index of this power so far as it exists in any given case. It is very largely conditioned on interest and physical conditions. The following necessitates very close attention as well as thinking and aids in marking out a limit in power to grasp a number of details. Give the pupil a sheet of paper on which three numbers are written, *e. g.*, 6—28—43, the three numbers being separated by dashes. Request the child to add one to each column and to continue the process, thus 7—29—44; 8—30—45, etc. As soon as each addition has been made cover it with a card. Continue the process during six minutes if the pupil does not show too great fatigue. At what stage are errors most numerous? How many additions were made correctly? A test in this line easier to make is this. Write fifty digits or letters in a straight line. Make them large and distinct and be careful that no order shall be followed in their selection which will make it easier to keep in mind one part of the series than another. Seat yourself by the pupil and allow him to look at the list with the direction that he is to see how many he can remember and write down. When he begins to write cover the paper and keep it covered till he has written all that he can remember. Let him then look at the list again. Cover the list when he begins to write, and repeat the process till he finishes. Note on a slip of paper how many digits he remembers each time and how many times he has to look at the list.

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Compare results obtained from some of the bright pupils with those from some of the duller ones. Does this test seem to offer any index of mental brightness? (27) Similarly select a symmetrical design composed of 16 straight lines of different lengths, such as might be used in decorating the corners of pages or of book covers, and try the dull and bright in regard to the number of times they must examine the figure and try before they can reproduce it without having the design before them.

As a test for a thing which one has no special object in remembering show the pupils at some time during the day a 4 in. line, and then an hour later ask them to draw one just as long from memory. Or you may ask them to draw one just 4 in. long and an hour later ask that it be drawn from memory.

Jastrow tried with his university students this test for the memory of angles. With no other aid than that of ruler and pencil ask them to draw angles of 15°, 30°, 45°, 60°, 75°, 90°, 105°, 120°, 135°, 150°, 165°, 180°.

Or again a square of a given size, *e. g.*, 2 in. may be shown them and the pupils asked to draw one of the same size. In all such tests what is the percentage of error? Does it vary with age? With sex?

The "mutilated text" (10) test with Elsenhans's modifications is interesting because of what is promised for it. It may be used in the study of fatigue, the study of memory and the study of ability to think. Modified from Ebbinghaus's first plan it is as follows: A selection is taken from the reading book. From this many single words and syllables are omitted. Care should be taken to make the omissions of as nearly equal importance as possible. Have the pupils read the complete selection in their books just before the "mutilated" copies are given them. The ability to complete the text would then be aided by the memory. The contribution of which could be measured by the number of times the pupil would have to re-read the original page before filling out the "mutilated" one correctly.

A very good subject for the language class would be to write all that the pupils can remember that happened "when they were little." Supplement with personal recollections and classify facts obtained as pleasant or unpleasant memories, memories of things, persons, animals, places, activities, etc. What are the predominating lines?

The most elaborate attempt to study the memory of children seems to have been made by a Russian student, Netschajeff. (28) It is as follows:

1. 12 different objects were shown under the same conditions.

2. 12 different sounds were produced in succession before

the school, each being continued five seconds with an interval of two seconds.

3. 12 different numbers were pronounced under the same conditions. These numbers consisted of two digits each.

4. 12 common words of three syllables each with marked visual imagery were pronounced under the same conditions.

5. Similarly with 12 common words of marked auditory imagery.

6. Similarly with 12 words with either imagery of taste, temperature or pressure.

7. Similarly with 12 words with emotional imagery.

8. Similarly with 12 words of abstract character. After the giving out of each list the pupils wrote all they could remember.

A high degree of attention (6) is required to count a series of dots close together without touching them. Binet in this test arranged series having these different intervals, .70, .65, .429, .30, .25, .18, .144, and .10 cm. The corresponding number in each series was 13, 14, 15, 17, 21, 27, 29, and 45. Pupils known to have visual troubles should not have this test. Compare the results of the brighter with the duller pupils.

Perhaps even greater attention will be compelled with the effort to count the beats of two metronomes beating at different rates. Set one at 30 and another at 40 per minute. Explain that both will be started at the same moment, and that they are to count both during two minutes. Do not let the pupils know the rates. Have them record the results when you call time. Perhaps the rates will have to be made much slower for children. Adults find it difficult to count both when moving at rates greater than 50 and 60 per minute.

The observation and memory of much of the every day phenomena has perhaps some interest. Griffing and France (29) had children write answers to the following: What was the weather a week ago to-day? Which way do the seeds of the apple point? How many years ago did Gen. Washington die? How many feet is it from the schoolhouse door to the corner of the street? How many seconds does it take you to walk this distance? How many times have you entered the schoolhouse door since vacation? How many ounces does this text-book weigh? (showing a text-book used by the class). Draw on a scale of one inch to twenty feet a ground plan of the lower hall. Mark the degree of certainty you feel in answers. A when correct, B when fairly confident, C when doubtful, and D when guessing.

For some test in rapid perception Binet arranged a clockwork device controlled somewhat like a camera. This he used for the exposure of a series of words, the time of the exposure

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being from .6 to .9 seconds. Taking pupil at a time he noted the number of mistakes, the number of times he had to expose each word before the pupil could tell it and the nature of the mistakes he made. Miss Aiken's book recommending such devices as the swinging blackboard will doubtless be recalled.

Association Studies. Several studies have been made of the tendencies in mental association. The questions of interest in this field are: At any given age what tendencies in association of words are prominent, from the part to the whole, special to the general, *vice versa*, according to the similarity of the sound of words, from an object to its qualities or *vice versa*, from one object to another of the same kind, from detail to detail, etc.? Just what tendencies are there in the associations formed?

Study in this field involves considerable drudgery. One of the easier tests would be to ask the pupils to write eleven words beginning with some concrete word like leaf.

Again write the following ten words on the board one at a time and ask the pupils to write with each word the first five they think of: book, man, tree, cat, hand, hat, bread, pen, write, blue.

Again select ten concrete words and ten abstract words. Give the children their spelling blanks and ask them to write, after your list has been placed on the board, the first word which each of the twenty suggests to them. This list can either be written one at a time or pronouuced one at a time to the school.

Again taking the single word with which to start, or giving no word at all, ask the children for their spelling lesson to write during five minutes all of the words they can think of.

At what age is the greatest variety of words used? Do boys or girls use the greater variety? Dr. Jastrow and Miss Calkins who have studied this topic perhaps most, classified their results under the following heads: animal kingdom, wearing apparel and fabrics, proper names, verbs, implements and utensils, interior furnishing, adjectives, foods, vegetable kingdom, abstract terms, buildings and building material, parts of the body, miscellaneous, geographical words, mineral kingdom, meteorological and astronomical, stationery, occupations and callings, conveyances, educational, other parts of speech, amusements, mercantile terms, and kinship.

Any association study gives some insight also into the things that have in some way appealed to children's interests. (31) It is the old problem over again: how to separate any one power in order to study it alone. In a different way from the foregoing the problem of association has been studied notably by Binet, Barnes and Shaw. Out of Binet's

somewhat extended list of questions asked his two little girls at intervals during a period of some months, Barnes selected the following which he gave to California children: What is a knife? bread? doll? water? arm-chair? hat? garden? piece of sugar? thread? horse? table? mamma? potatoes? bottle? flowers? snail? mouth? lamp? bird? dog? carriage? pencil? earthworm? shoes? finger? clock? house? wolf? omnibus? village? box? handkerchief? His answers were classified under the following headings: use, larger term, action, quality, place, color, form, structure, substance and miscellaneous. It was also of interest to compare the results with the definitions given by Webster.

Shaw took the same list of words, and in making the test did not ask a question, but gave out each word and then wrote it on the board, directing each pupil to write down as rapidly as possible whatever came into his mind. In studying his results he found eight additional headings necessary: quantity or number, smaller class, similar object, time or occasion, associated object, like or dislike, possession, sentence making.

Still other phases of association may be studied by reviewing in any good psychology the laws of association and noting the frequency of the use of each in the conversation or written work of children.

Discrimination. Some measure of ability in discrimination may be made by the use of the following: Print several paragraphs. Make a copy for each pupil. Ask the pupil to draw a line across all of the letters of a certain kind, *e. g.*, the j's, or complicate the experiment by asking that lines be drawn across several letters, *e. g.*, the a's, s's, d's, f's. In case more than one letter is to be barred print them by themselves on the margin of the page. Note in this study the time required, the errors committed, the nature of the errors committed, whether barring the wrong letter or failing to bar the right one, etc. A fatigue study can be made of this by having the pupils draw a line to indicate their progress each four minutes. In this, as in all of the other studies, the ability of the individual should be compared with that of his mates.

In the study of ability to think note the readiness with which the children deal with the ordinary affairs of life, the ordinary problems, the emergencies, etc. How far can they trace a series of causal relations, say in geography or history? How about the memory of your best thinkers? Of what type is it? Are the children who do poor work in arithmetic good visualizers?

It is worth while to examine the following offered by Pearson as a scale of intelligence in children. There is much of interest in it.

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1. Very dull. Capable of holding in their minds only the simplest facts, and incapable of perceiving or reasoning about the relationship between facts.

2. Slow dull. Capable of perceiving relationship in some few fields with long and continuous efforts, but not generally or without much external assistance.

3. Slow. Very slow progress generally; but with time and continual care progress will be made.

4. Slow intelligent. Slow generally, although possibly more rapid in certain fields. Quite sure of knowledge when once acquired.

5. Intelligent. Ready to grasp and capable of perceiving facts in most fields; capable of good progress without much effort.

6. Quick intelligent. Very bright and quick in both perception and acquirement, and this not only of customary but of novel facts. Ready to reason rightly about things on purely self-initiative. To this list Pearson thinks there might be added or inserted another class, the quick inaccurate. These classifications of course shade into each other. Yet the scheme is certainly usable.

So able a student of children as Kratz has the following blank filled out for each pupil in his schools: building, date, pupil's name, age, grade, health, nationality, temperament, general ability, sight and hearing. Twice each month a record is made of the following: observation, memory—verbal and thought, imagination, thought, leading feeling through which to govern, self-control, sense of right, use of language, subject of deepest interest, chief characteristic, greatest deficiency both mental and physical.

Interests in History.(33)

A number of tests have been made in different school subjects which have a bearing on the ability of children to think, and especially in the use of the causal relation. Notably should be mentioned those of Mrs. Barnes on the historical sense, the ability to make inferences and the sense of evidence. Her tests are as follows: "Name something that happened before you were born which you know is true, and tell how you know it is true." "How do you know that such a man as George Washington ever lived?"

"If you were shipwrecked on an island in the middle of the sea, and you found in one corner of the island an old house of logs, and a part of an old wooden boat, with broken arrows in the bottom of it, what would these things tell you?"

"There was a king who had a beautiful wife whom he dearly loved. But a fair prince came and took her away to a

far country. Then the king and all his men went to fight the prince, who lived in a great city all walled about with stone. For many a day the king and his men tried in vain to enter it; but at last, by a clever trick, some of his men got into the city and burned it to the ground. and so the king got his wife once more. What questions would you like your teacher to answer about this?"

"Which of these two accounts is the better, and why? Which would you keep if you could keep only one, and why? (a) The defence of Fort Sumter by Maj. Anderson was brave and stubborn. The garrison was under fire for thirty-four hours, the quarters being entirely burned, and the powder magazine being entirely surrounded by a ring of fire; starvation, too, was staring them in the face. Anderson therefore surrendered, saluting his flag as he marched out with guns and drums and flying colors." (b) Dispatch from Maj. Anderson to the authorities at Washington: "Sir: Having defended Fort Sumter for thirty-four hours, until the quarters were entirely burned, the main gates destroyed, the powder magazine surrounded by flames, and no provisions but pork remaining, I accepted terms of evacuation offered by Gen. Beauregard, and marched out of the fort with colors flying, drums beating, saluting my flag with fifty guns.

ROBERT ANDERSON."

This test has not been found feasible for children under seven years.

Somewhere Mrs. Barnes has published a test which bears on some lines of interest in geography. She chose pictures of scenery in foreign lands and showed them to children without telling what they were. The children were then told to write out the questions about these pictures which they would like to have answered.

The tabulation for these tests of hers is perhaps fairly obvious. In the first one the things that happened may be classified in regard to their character, and the evidence in regard to its character—on what it is based, etc. In the second the character of the inferences may be studied as well as their number. In the third the questions will clearly define themselves and easily indicate a basis of classification—who, where, how, result, personal detail and feeling, general detail, ethics, time, number, truth. And in regard to the test in geography similar questions will be asked.

INTERESTS IN SPELLING.

Take the list of poor spellers and try to determine their type of mind. Are they eye-minded or ear-minded, etc.? Do the poor spellers visualize the form of words readily or not? Are

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they close observers? You can most easily answer the last question by giving the class, as Miss Carman (34) did, a page from a reader—a page which you print off and in which are fifty words mispelled, for them to correct. Note the time they take and the percentage of errors—of words which they overlook.

Yet another question to be dealt with is that of the amount of time and frequency of spelling lessons. Draw on your own observation,—on your own school days and practice, and the experience of others. Does the policy of merely "keeping children at a subject till they know it" bring the desired improvement? Do five spelling lessons per week yield any better results than two? Does a long period given to the spelling class prove any more fruitful than the short period? Have you not among your acquaintances people who started to school late, perhaps when 14 or 15? What has been their success in learning to spell? Do your poor spellers make most of their mistakes in the first or in the last part of words? Habits in reading may have influenced them in this. It is possible to read and see very little of the last part of many words.

Interests in Reading. (35)

Children's interests in reading have received a good deal of study. Librarians have classified the books which children have drawn and in their statistics are many facts of interest to the teacher. Talk this over with your librarian if possible.

The reading of pupils is such an important subject; so much depends upon it in the way of moral growth, future bent of interest, choice of occupation, the amount and kind of reading done, etc., that one should get clearly in mind the changes in interest that normally come with development, and should keep them in mind in the shaping of the course of study in reading.

This test was used with success some years since.

Give the names of all books you remember to have read outside of required reading for school work during the last six months, stating which, if any, you have read before. Where do you generally get your books? What is the most interesting book you have ever read? What books have you found most helpful? What most harmful? What magazines do you read most regularly? What ones are taken in your family? How many short stories do you read on an average each week? Do you talk over what you read with any one? Whom? Give the names of all papers and magazines that you read frequently or hear read? What ones do you like best? What parts do you read first and why? State as accurately as you can the number of books you read outside of school work. Write a sentence about one or more of the books that you have read.

Name some of the books you like best of all that you have ever read or heard read outside of school, and state how long since it was. What books have you read or heard read that you did not like, and state how long since you read them. What books shall you read next, if you can get them, and why? Write the subjects of all the lssons that you remember from the reader you used last year. Which one did you like best? What was it that you liked in it? If you could select just one book for your own, what would you take?

Select among these or other similar questions that suggest themselves to you, as many as you can use at one time and give them out as a basis for a language lesson.

It will also be of interest to take some book like "Little Men" or "Little Women," read it to your pupils and have them write during the period for the language class their "opinions" about it.

It is especially important to get the point of view of life taken by boys, notably the boys of the period from 12 to 17. The problem of discipline is rarely of consequence with girls. The girl the teacher can largely judge from her own point of view and recollection. She has seen how life looks through a girl's eyes, but the boy nature needs, especially by her, the most careful study. He is above all *the* problem.

Interests in Arithmetic. (36)

The ability of children to reason exactly is a wide field for research. It is not claimed that research work in this or any other field can do more than make some contributions toward any final solution of problems, but such work has a very important place in dealing with the general problem. The public holds mathematics, or rather arithmetic, in high esteem and is in the habit of insisting on its importance. Among the first problems that would be well to take up then would be one in which the public can give a great deal of help. Learn from your acquaintances just what subjects in the arithmetic they draw from in their everyday life. What does a housekeeper use? What does a business man use? What does a mechanic use? etc. If you are of the opinion that "the training in thinking given by a study of arithmetic is of great value" attempt the analysis of the thinking done in this subject. I find that most people who make that claim are quite at sea in this. And yet if the "mental training" of arithmetic has the value claimed for it, teachers should be able to see just what the forms of thinking gone through with are. Take your text-book on this subject and see if almost, if not all, of the problems do not involve the following: Reasoning from many to one, the value of an integer greater than unity being known

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to find the value of unity—*e. g.*, If 4 pencils cost 20 cents, what should one cost? second, the reverse of the first; third, reasoning from the known value of one integer to the value of another; fourth, reasoning from the value of an integer to the value of a fraction; fifth, the reverse of the fourth; sixth, reasoning from the value of a known fraction to the value of another; seventh, reasoning from the value of an integer to that of an integral remainder, *e. g.*, a storm broke off 3-5 of a tree and left a stump ten feet high, how high was the tree? You are accustomed to think of these under the forms of the cases of fractions, or of the cases of percentage, or of those of decimals, all of which present the same kinds of thinking. You may add to these the thinking done in addition and subtraction and perhaps that in ratio, and you will have very little left, *i. e.*, in the formal phases of thinking in arithmetic of which so much is made in discussions on this subject. All problems will be made up of combinations of these, and here one must take into account, as suggested elsewhere, how many combinations the children of any given grade can deal with. Without taking up space to give the series of problems which I have used in testing I suggest that the following lines be studied: A series of problems in the comparison of numbers in which the numbers and fractions used shall be small, in order that the test shall be mainly on the reasoning involved; second, a series which shall involve the cases in fractions, and again the fractions and integers should be only large enough to make the children feel that the work is not too easy; third, a series of four problems in which the first shall involve only simple multiplication and division, the second only multiplication, division and addition, the third the additional step of subtraction, and the fourth, to include also ratio; fourth, a series which shall include nine problems, the first having two steps, say multiplication and addition, then let each succeeding one contain one more step from the fundamental processes, the point being to measure the number of factors in a problem with which the pupil can deal without falling into confusion by mere number of details. All such work can be given out during the period for the arithmetic work.

I ought to add also this point for study. How large fractions can the pupils of any given grade deal with to advantage? Similarly inquire concerning the size of the integers suitable for problems. Do you find that children increase in power more rapidly when you give them the large fractions and integers or *vice versa?*

It would be a very good problem for study and discussion to investigate how much of what is presented to the arithmetic class really remains with them for any length of time. For

some test of this give the class at the beginning of school in the fall the same questions used in the spring examination, or later in the year give questions which they have not heard mentioned in class for a month. Study the nature of that which has been forgotten as well as that which has been remembered. Is it really possible for children to reason much about things concerning which they have had no experience? About transactions not likely to come up in their lives for years to come?

Give them this set of questions: Have you a regular allowance? If not would you like to have one? If you had an allowance of 50 cents a week to do as you liked with, what would you do with it? How have you ever earned money?

INTERESTS IN LANGUAGE. (37)

There is an opportunity in the grammar and language classes to study something of ability to think. It is suggested by the last part of Sherman's Analytics of Literature. It will be a study involving considerable drudgery, but will help in getting a new point of view in language teaching. Assign the classes in grammar and "language" for their lesson an exercise in writing, taking for the subject something with which they are familiar and on which they have not been drilled, the purpose being to get from them sentences in which they give free expression to whatever are their tendencies in the use of language forms. Perhaps the topic mentioned on another page—their earliest memories—would be a very good one. Tabulate the papers with reference to the amount written, the number of simple sentences, compound sentences, complex sentences, and compound-complex sentences, also the number of each kind of subordinate sentences, the number of predicates per sentence, the average number of infinitives and participles, etc. You can add to this by noting the percentage of each. At what age do you find children using complex sentences with reasonable accuracy? Do you find that power in the use of the complex sentence increases with grade? Do you find the number of long involved sentences decrease with grade or is there not an increase of them in the seventh and eighth grades? All told do you feel that the current systems of language lessons give any added power in the use of language? Supplement a study of this kind with observation of the kinds of sentences young children use. Do not expect any written work of consequence from first and second grades. Supplement it still further by reading Sherman's later chapters, beginning with chapter nineteen. This will help you to see something of the historical order of the development of the sentence form in English. It may be still further supplemented by reading the biographies of a

number of writers of good English—not those of men and women of genius, but men and women of recognized ability. Let your questions in this be: How did they obtain their interest in good reading, how in expressing themselves well, what is there in their training that will be suggestive to a teacher of language and grammar? Perhaps it may also be of interest to see if there is any record of a school teacher giving them—any of them, their interest in good English, or did any develop their ability to write or speak well in the public schools?

When do children grow interested in some form of secret language, *e. g.*, the deaf and dumb alphabet, cipher alphabets, "hog" Latin, telegraphy, etc.? How should this tendency be utilized? Of what different forms can you learn from inquiry and observation?

The Puzzle Interest.(38)

There is a time in the lives of children when they take an interest greater than at any other in puzzles. Many of these can be utilized on the stormy day. They involve more or less reasoning, and give some test of the ability of children to think in dealing with the new or novel situations presented in these. There are the mechanical puzzles (I follow Lindley's classification), geometrical puzzles, physical puzzles, the arithmetical ones, the quibbles and catches, riddles, rebuses, enigmas, etc., parlor magic, and the logical and philosophical puzzles. Cassel's Book of Sports and Games is full of them. The puzzle used by Lindley in his study is made as follows: Mark off a square and subdivide it into nine smaller squares of equal size. In the upper right hand square and the lower left hand square draw diagonals from the upper left hand corner to the lower right hand corner. In the upper left hand square, the central and the lower right hand square draw diagonals in the opposite directions. Trace *all* of the lines without lifting the pencil and without retracing any line. Here the problem is to trace the figure throughout without taking the pencil off of the figure. Draw it on the board on a stormy day and let the children try it and give you their papers with their results.

Here is another of a different kind that will make a good many of even your older pupils think pretty hard to succeed with it.

```
9XX) 4XXX4X7 (XXXX
     X9XX
     ----
      X1XX
      4XX5
      ----
       2X7X
       XXX4
       ----
        XOX
```

In this instruct the pupils to supply the place of X's with the proper figure and prove their work.

INTERESTS IN DRAWING. (39)

Children's interest in picture making begins very early. It needs but little suggestion to arouse them to it. It is worth while before making any attempt to investigate this interest to turn back and think over your own interest in drawing, and also to discuss this with other teachers, exchanging experiences with them. Some of the important questions are: What use do children make of drawing when left to their own devices? Did your own interest in it survive? How do you account for the fact that so many lose their interest in it? How yourself, perhaps? Have you any acquaintances who have any skill in this line? Did they derive their interest from a course of drawing such as is generally given in the schools? How about the artist, does his biography show that he "got his start" from public schools? These questions are suggestive of lines of inquiry outside of ordinary school work.

What use do children make of drawing? How does it appeal to them? The first test of consequence, of which I know, used to find an answer to these questions was that of Barnes. He used a translation of Hans-guck-in-die-Luft from (Hoffman's Strewwelpater), selecting it because it was simple, short, contained no difficult object to draw, and did contain two distinct catastrophies. That the story was suited for this, and that it would appeal to children was assured because Hoffman had developed it through a long course of medical practice in his dealing with children. The story was read to the children, they were told to draw one or more pictures from the story, it was then read to them once more, and they drew what they wished. There was no conversation and no other directions were given. Any story which approaches these conditions or betters them will do for a similar test. Study with reference to the parts of the story which appeal most powerfully to the children, and note especially how many of each kind of pictures were drawn. In connection with this it is worth while to have a copy of Hoffman's book, even the translation, though that is a poor one.

Try reading favorite stories of children to them, and then ask them to make such pictures as they like about these stories. Classify these pictures according to conventional designs, persons, animals, birds, plants, trees, houses, utensils, engines, cars, stories, etc. Note any efforts at decoration, the use of the time relation, the absence of details in a picture, efforts at story telling by pictures, etc. Place, as already suggested, pictures before them and ask them to write about them. Among what class of your pupils is the tendency strong to put a story into the picture. Note the stages in which the types of mind stand out most prominently. Do children show traces of pass-

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ing through a number of these stages, *i. e.*, are these types successive as to years?

In connection with this topic, likes and dislikes in color have been studied. This can be tested by asking children to write their favorites or by giving them opportunities to select among colors. If this is tried, colored cards, such as the Milton Bradley Company make, are very good. In this, use only cards having the principal colors.

Luckey(40) has made a very interesting study of the indirect range of color vision by the use of the perimeter. Seated at the instrument and looking straight ahead the children were to notice when a given color came within range, and report it. The order in which colors appear is of considerable interest.

Interests in Nature.

For a language lesson give this: Write a list of the flowers and trees which children like and those which they dislike. Tell why they like or dislike them. Try to write a story about what trees do, what they say, what they feel, what they like, what they dislike, what they think of people, what they think of each other, etc. What stories do you know about trees? What trees are some children afraid of? Why are they afraid of them? Do you own any trees? What kinds?

Select and arrange somewhat similar questions in regard to birds, animals, and insects. Also recall your own and your friends likes and dislikes in these lines.

It is difficult to get at the feelings of children toward inanimate nature. Indirect means are generally the most satisfactory. Questions put under the guise of what they use to think or of what other children think are likely to be the most satisfactory.

Try this also: For your work now you may write out what children think the moon is for, or what some people think it is for, what it does, how it came to be where it is, what it thinks of us, what makes it grow large and again small, what used to be in the moon, how it makes folks feel, what signs there are about it, and any stories you may know about it.

Arrange similar points concerning the sun, the stars, storms, and clouds. Perhaps in telling all that the sun or moon does some trace of ability to see causal relations will appear that will be of interest.

Try this about stones: What do people believe about amulets, charms, lucky stones, precious stones and metals? Why are they worn? What ones are most desirable?

The Relations of School Children to one another.

Note the groups into which they seem to divide themselves

on the play ground and elsewhere. On what do these divisions seem to be based? Study the leaders of each group. What are their characteristics? Their likes and dislikes? Their reading? Their home environment?

Closely akin to this will be the disposition to organize gangs, clubs, or societies. It needs little to start children to making such organizations, but you might find them an embarrassment. Their views about such things can be gathered only with difficulty and tact. Your experience and that of your acquaintances will tell you something worth thinking over. It becomes a more and more interesting field. Study and classify the societies organized for children by adults. Get track of all you can by inquiry and reading—of those organized by children, and classify as secret, predatory, social, industrial, philanthropic, literary, art, etc.

Among the pupils will be found the quiet child. (43) He will make an interesting study. How old is he? So far as you can learn is he growing rapidly or not? Does he seem to be well nourished—supplied with an abundance of good food? Is he lazy? Self-conscious? Companionable? Does he associate with older children? Is he studious? Thoughtful? Sad? Gay? etc.

Again there is (43) the troublesome boy and occasionally the troublesome girl, but so rarely that this study may be thought of for the boy. Is he older than the average of his grade? Has he any physical ailment or defect? Well nourished? Overgrown? Or undersized? Has he any sense defect? Is his temperament a nervous one? Is he moody, sullen or obstinate at times? Are his parents of a nervous temperament? What is the most troublesome feature of his conduct? Does he use tobacco? What effort has been made either at home or at school to help him develop self-control? What right lines of work does he seem to like best? Does he have access to good reading? What was the temperament of the teacher whom he gave so much trouble in the past? Do his bad traits seem to be shown occasionally or continually? Just what are these bad traits?

Often most vexing to both parent and teacher is the (43) only child in a family. About him centers all of the life of the home, and it is not surprising that he gets an undue opinion of his own importance. Note his school attendance. Is it regular, or irregular? How does his work compare in quality with that of other children? Compare his likes and dislikes with those of other children. What are his best traits and what his worst? Has he mental or physical defects? Trying as are such children, one can have more patience with them after reading the article by Bohannon on this subject.

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The peculiar and exceptional (43) child presses himself on the attention of the teacher. Here again Bohannon has something of value. Note these points: Is he exceptionally good looking or homely? Large or small? Any bodily deformity? Any sense defects? Any bodily weakness of which you know? Is he exceptionally strong, agile, clumsy or deft? Has he any special gift of the senses which you can determine? Look next on the psychic side. Is he exceptionally courageous or timid? Cleanly or dirty? Orderly or disorderly? Obedient or disobedient? Truthful or untruthful? Cruel or sympathetic? Selfish or generous? Talkative or silent? Frank or secretive? Buoyant or despondent? Dainty or gluttonous? Blasé or otherwise spoiled? A doubter, an investigator or critic? A buffoon or unusually serious? A restless, fickle, or scatter-brained child, or a tenacious one? A bad tempered or an unusually good tempered child? A careless, easy going or a fastidious child? An inquisitive, imaginative, or poetic child? A teaser or hector? A nervous child or apparently without nerves? A querulous child? A whining child? A dignified or self-poised child? Does he act habitually with abandon? Note especially if one trait or group of traits is so marked as to color the entire character making him generally noticed for them, and perhaps to be influenced by them in his future career.

The truant, (46) (48) and truancy is a feature of every school. Here we touch upon the motives and types of mind that are found among tramps. All have perhaps felt at some time of life impulses which unchecked might have led to the reform school or the truant school. Consider first your own childhood. Did you ever have a desire to run away? Or to leave home? At what age did such desire occur? What was the cause of it? Did you carry out your desire? If not, what prevented you? What treatment would you recommend for runaways and truants? Perhaps you were a truant from school at some time. Recall the motives that led you away. If you now excuse your conduct then, on what grounds do you do so? The same instinct that is sometimes at the bottom of the truancy habit shows itself in other ways. There are people who are said to have "a roving disposition." What is such a disposition? Others move frequently. Is it from some genuine necessity or the love of a new neighborhood? Then there is the inveterate visitor, call-maker, gad-about person who will not, or cannot stay at home. Study, if you have the opportunity, some such person. What does weather and season have to do with truancy? What the unusual event, like the circus? Would you make any modification of school work on account of anything of the kind, excursions, Saturday trips,

out-of-door recitations, etc.? Perhaps you can get the children to write on the topic of truancy. Here again, however, the suggestibility of the children makes it important that the subject be approached with tact. The following topics would be of interest. Perhaps you can get the truant himself to write about them after the offence has been committed: *e. g.*, "What caused you to play truant? Where did you go and what did you do? What did you tell your parents? What did you like or dislike about school that made you play truant?"

It has been asserted that many truants are defective physically. Note any cases of which you may know in this regard. Are they shorter, lighter, less well fed than other children of the same age? Are they from the higher or lower grades of society? How do they compare with others in their school work?

There are always cases of chumming. Select some case and setting apart several pages in your note book make memoranda on the following: Find out first, if you can, without letting the children know it, why they like each other. To what extent are they together? What does each imitate in the other,—qualities, habits, actions, etc.? In which is the imitation more prominent? How far do they share their pleasures or work with each other? In what ways do they take part in each others troubles? Have they any common infirmity or fault, defects or enemy? What is the temperament of each? What breaks the friendship at last? It will be of interest, also, to think over the history of your own chumming.

Ask the children to write answers to these questions: What is the best kind of a chum to have? Why? What person of whom you have heard or read is it worth while trying to be like? Why?

Children's Ideals of Right and Wrong.

What constitutes right and wrong in the minds of children? They will be found to have a pretty clearly defined list of things that are permissible, commendable, objectionable, things right under some circumstances and wrong under others. Their ethics may be ever so faulty, but it is well to know all about their views in order to try to lead to better things. It will be found that children pass through different stages in their attitude towards punishment. See if the following will throw any light on the problem: To-day you may write about a punishment that you once received, when you were little, that you think was unjust. Tell why you think it was unjust. Have you ever received a punishment that you deserved? What was it for? What punishment have you seen anybody else receive that was right? What was it? Why was it right? Classify

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as to who punished, what the punishments were, what the offences were, and what the reasons for being just or unjust were.

On another day try this: What things are wrong for children to do, and how should they be punished for doing them? Should any offences not be punished? Why?

Again: One day the teacher left the room, and while she was gone several children in the room became disorderly. Hearing the noise the teacher came back, but did not know which children were to blame. None of the class would tell, so she kept the entire class in after school. Was that right or wrong, and why? Give this out under circumstances similar to that of other tests made.

Perhaps this can also be tried: Once a mother gave a child for a birthday present—the child was just six years old—a beautiful box of paints. In the afternoon, while the mother was busy in another room, the child painted all of the parlor chairs and then called out, "Oh, mamma, come and see how pretty I have made the parlor." The paint could not be washed off, and so the chairs were spoiled. What should the child's mother have said or done?

Normally a child grows away from selfishness to unselfishness. Conditions of health, age and environment are factors of considerable importance in this evolution. In your memoranda book note any cases that from time to time come under observation of unselfish conduct as you see it in children. Note in each case the age of the child, home and hereditary conditions so far as can be ascertained, and, although it will be very difficult to determine it, whether imitation, precept or any other than an innate generous impulse was the motive of the act. Note also the health of the child whether it is normally delicate, or active and vigorous. Do you find there are times when the same child varies, *i. e.*, is he now selfish and again unselfish? Does selfishness or unselfishness seem to predominate among the children of any particular age? What is the effect of stories of selfishness or unselfishness read to children? Study your own childhood in this regard, and compare what you get therefrom with your observations.

Try this: What was the best thing you ever saw one person do for another? Perhaps you have read or heard of something better. What was it?

The study of children's lies cannot probably be approached directly. One can introspect and think over his own childhood as to just what telling a lie meant to him then, just when it was permissible to vary from the exact facts, how great the obligation was to tell the truth to enemies, how much one might embellish a story, or even invent one, etc.

This may be supplemented by observation of tendencies as they appear from time to time among the children, and should the situation at any time warrant it, the children may be asked to write answers to this: Is it ever right to lie or to deceive? Perhaps the results may not be what was hoped for, but society generally sins a good deal.

For general discussion such questions as the following are of value: What kind of moral ideas do children have? How do they come by them? How are they modified by experience? To what extent are they determined by environment? Are they developed by direct instruction by teachers? Or, do they arise through children's observation of their own conduct and that of their teacher's? To what extent does the Sunday School help boys of 13, 14, or 15 years?

Questions for written work may be helpful in getting children's point of view: What do people think it is to be good? To be bad? What things are right to do? What are wrong? Why is it wrong for anybody to steal? Why do not boys like to go to Sunday School?

Do girls or boys throw the greatest emphasis on what not to do? Does the ideal of right and wrong in the case of boys differ from that of girls?

What ideals have children in regard to enjoyment, right pleasures? Ask them to write out an account of the best time they had during the last vacation. What day can be recalled when they had the best time in their lives? What was it that made it so? What was the most unpleasant time? What was the funniest thing that they ever saw happen? Perhaps they have heard or read of something funnier. Let them write an account of it.

The study of children's ideas on theology is something that can in all probability not be taken up in public schools unless it is done in such an incidental way as not to attract attention from the community. Perhaps by talking with children individually when the occasion favors, it can be done. One might be able in a Sunday School class to have paper and pencil ready and ask them to write out their answers to questions like the following used by Barnes:

Where is God? What does he do? Why can we not see him?

Why do people die? Where do they go? Where is heaven? Who goes there?

What do people do there? What will children have or do there?

What is hell? What must a person do to go there? Where is it?

What do angels do? Why are some people afraid of ghosts?

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What do some people think witches can do? Why do people pray? Why do we not always get what we pray for? Why do we go to church?

Why do we celebrate Christmas? What books or stories from the Bible do you like best? Why?

A new and rich literature has grown up in the field of moral and religious training in recent years. It will be well to get in touch with it. The following are suggested: Hall: The Moral and Religious Training of Children and Adolescents, *Ped. Sem.*, Vol. I; Burnham: The Study of Adolescence, same; Daniels: A Study of Regeneration, *Am. Jour. of Psych.*, Vol. VI; Lancaster: The Psychology and Pedagogy of Adolescence, *Ped. Sem*,, Vol. V; Dawson: Children's Interests in the Bible, *Ped. Sem.*, Vol. VII; Hall: Children's Lies, *Ped. Sem.*, Vol. I; Hall: Moral Education and Will Training, *Ped. Sem.*, Vol. II, Barnes: The Theological Life of a California Child, *Ped. Sem.*, Vol. II; Starbuck: The Psychology of Religion; Coe: The Spiritual Life; Ellis: Sunday School Work and Bible Study, *Ped. Sem.*, Vol. III, p. 363; Atkinson: Child-Study in Secondary Schools, School Review, Vol. V; Burnham: The Psychology of Adolescence, School Review, Vol. V; Scudder: Childhood in Literature and Art, Houghton, Mifflin and Co.

Many children have fears that (44) trouble them a great deal. Encourage them to tell them to you. You will not only learn much of interest, but will also help to dispel the fears merely from their being told. Try this: "You may write for your exercise to-day some account of the things of which some children are afraid. Tell how they came to be afraid of these things. Do you know how old they were when these things first frightened them, and also when they were no longer afraid of them. Were there any things of which you used to be afraid of? You may write all about them." These fears may perhaps be classified as connected with the phenomena of the heavens, of inanimate objects, of animals, insects or reptiles, of people, of darkness, solitude, ghosts, etc., of pictures, or fairy tales, of conscience or religious fears, of illness, disease, friends, loss of position, or health, etc. Gather data from the experience of others.

The sense of honor among children can be studied by observation perhaps better than by direct discussion of the subject with them. An important study of this field by Prof. Clark will soon be published. Make memoranda of cases you have noticed and of those you recall in your own childhood. What class of children best illustrate this theme; good or bad; boys or girls; rich or poor; bright or dull; city or country? What differences have you noticed in nationalities? Note cases of honor in games of any kind. What devices or methods of discipline by

which appeals to the sense of honor have been made do you recommend? Does it retard or assist obedience? What individual differences in the sense of honor of young persons may be due to the like or dislike of the teacher or friend involved; to the lessons or sports; to home life? How much of it depends upon a keen sense of truth and honesty? Compare your observation of children with cases of professional honor among teachers, clergymen, doctors, lawyers, and business men.

MISCELLANEOUS.

Success in teaching is rather to be measured by ability to foresee and prevent the undesirable than in smoothing over after the trouble has happened. The dull, the troublesome, the unattractive children present in themselves most fascinating pedagogical problems, and interest should be taken in such children promptly in order that they too shall develop the characteristics found in bright and clean children.

Keep children's attention turned outwards. Utilize and direct activity. Check it, pen it up and it overflows, breaking out in unexpected places. Children generally do not have enough to think about. Even fads have their advantages. Stir up interest in future possible employments. Try this exercise: What trades and occupations are desirable to be followed when boys and girls grow up? Why? What particular one would be most desirable? Why do some children quit coming to school so early?

(46) Keep a careful record of the weather and the conduct of the school. Do you find that there seems to be any relation between the windy, rainy, or otherwise stormy days and the conduct of the pupils? Keep some tab on your own feelings on such days also.

(47) Again: Ask the children to write for a language lesson this: Recall all of your teachers down to the time you came to school to your present teacher, and tell all you can about the one that helped you most. How did she do it? Do not name her, but describe her.

Again let them write, this time on the question, How do grown up people differ from children?

There is a period in the lives of both boys and girls when a changed attitude, often for the better, sometimes for the worse for a while, comes over children in regard to dress. Be watchful for it and notice evidence of care, neatness, and taste or the reverse. Note their favorite colors and love of adornment, and do not be severe on it. So great is the teacher's influence that she should never forget that the old teacher, both male and female, is very prone to lose ability to dress tastefully, so that it becomes possible generally to tell them by their peculiarities of dress.

XUM

The sense of time develops very slowly. By using Mrs. Barnes's tests you will get something in that line. Supplement that by the use of the following: asking the children to write: One day, when I was about seven years old, I went to a neighbor's to play, and my mother told me to be back by six o'clock. I was enjoying myself so much that I did not know how the time was passing, until I noticed that it was getting dark. Then I ran home as fast as I could, but it was half-past six when I reached there, and the family had been to supper. Would it have been just or unjust for my mother to have scolded me for being late, and why?

Some children enter school late. It is easy to learn of people who in their childhood also entered school late. An interesting study may be made of all of these by ascertaining the following facts: The home life, general environment and physical condition of the child before and after entering school, the age at which regular attendance at school began, some estimate of the school attended—if you are not already familiar with it, the progress of the child as compared with others of the same age who entered school about the usual time.

Little study has yet been made of the development of the will as such in children. Miss Merrill has used the following: Give instances where you have allowed a child his choice in any matter. State the circumstances. Did he desire to choose? Did he choose promptly? Was his choice independent or influenced by others? Under the same conditions did he always choose in like manner? Have repeated acts of choice made him readier to choose? How has this affected the child's habits of obedience? Did he become willful, or was he ready to submit when choice was impossible? Give any other details showing immediate or remote effects.

Suggestibility. (45) The readiness with which some children will take a suggestion and others will not, and the readiness with which even a very great many older people at once think of the very opposite thing from that mentioned and desired to be done is one of the interesting phases of human nature. It needs to be taken into account in all study of child life. Does it make any difference who proposes a given game or piece of work, in the readiness with which it is taken up? Does too great willingness to accede to a request always lead to the privilege being used to the utmost? Have you not sometimes had to make the suggestion first that such a thing has been proposed but that there are doubts concerning it in your mind, before you could get any great number to be willing to take up what you wanted done voluntarily? How many times have you had to get some one else to make the desired suggestion before it spreads through the school and comes up to the teacher

as a request which she will please grant? To start the suggestion, to keep it growing and to grant the permission at the right time smooths many of the rough ways of school discipline.

What pupils will take a suggestion from you most readily? What ones cling most to their own opinion, refusing persistently to change their minds? Observation during the first week alone tells of those who insist most strongly on doing their own thinking, or in thinking the very opposite from what the teacher or text-book insists. Take the teaching of temperance as it is usually attempted in the schools. Does the fact that from two to three times a week, from the high school to the kindergarten, children are warned against the evils of tobacco, liquor, opium, and gum chewing really deter from these habits? The girl with her inborn tendency to do what is generally right and proper will conform, but how about the boy? Observe the older boys and men and ask when occasion offers what they think about it? Read in any good psychology the chapter on suggestibility and imitation. The best book on the subject summing up investigations and giving many tests is that of Binet, La Suggestibilité. Most of his tests were given to pupils taken singly in a room by themselves. Among the more interesting tests may be tried the following: In this the purpose is to give a suggestion of increasing length of lines. Arrange a series of twelve lines, the first twelve mm. long, the second twice as long, the third three times, the fourth four times, the fifth five times, the sixth the same as the fifth, the seventh six times as long as the first, the eighth the same, the ninth seven times as long as the first, the tenth the same, the eleventh eight times as long as the first, and the twelfth the same. Show them to the pupils one line at a time. After each line has been seen ask the pupil to take the strip of paper which you give him and indicate on its edge the length of the line he has seen. Take a different strip each time. Make no comments on his decision. Has the effect of the constantly increasing length down to the sixth led him to make the sixth, eighth, tenth or twelfth lines longer than the immediately preceding ones?

This test can be repeated with a set of lines in which they are arranged in a geometrical increasing ratio.

Another device is this: Draw a series of parallel lines thirty-six in number. Make the first twelve mm. in length, the second twenty-four, the third thirty-six, the fourth forty-eight, the fifth and all of the others sixty in length. Try as before. How far down the list will the suggestion made by the first five lines be carried? To what extent are the lines reproduced exactly?

Similarly a set of weights may be arranged.

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In these tests the suggestion is given by the lines and weights themselves. Another may be tried and a suggestion given by the teacher. Arrange a series of colors in which the first is blue, the second gray blue, the third greenish blue, the fourth bluish green, the fifth green, the sixth yellowish green, the seventh olive green, eighth yet more yellow, and the ninth golden yellow. Show the pupils first, cards having the ordinary colors on them in order to determine whether any cannot name the colors correctly. Arrange the nine colors selected on pieces of white card board, giving the same space on each to the color 3.5cm. x 2.5cm. Ask the pupil being tested to look at the card you lay before him, then to name the color distinctly and then to write its name. When he reaches the green card and so pronounces it, say in as quiet a matter of fact way as possible "no, blue." Try this with the succeeding colors also. Note the classes into which the pupils fall. Binet finds those who take the suggestion at once and call the green blue, then those who appeal to you to decide it and lastly those who announce their own opinion most conclusively.

A series of twenty-four lines may be prepared on a sheet of paper beginning at the left hand side. Make these seven mm. apart. Make the first twelve mm. long, and increase the length of each by four mm. Number each. Ask the child to examine the page with the lines. On three separate slips of paper of the same size have a single line, the first thirty-two mm. long, the second fifty-six mm. long, and one eighty mm. long. Taking line at a time ask the pupil to pick out one of the same length. When he has decided say, "Is it not the one above?" or "Is it not the one below?"

Binet says that all experiments in this field are according to the following formula: There should be made at first several sincere tests, for example, several short problems, each solved in the same method. Follow these with a problem which is like the others in form, but which has a different process involved. How many will be misled by it?

A stimulus of light, sound, touch, or indeed through any of the senses may be given in good faith, then the signal for the stimulus may occur as usual, but the stimulus not be given. How many will think that they notice it any how? Scripture tried this with a mild electric current. Small bandaged the eyes of subjects and struck matches, waving them back and forth over the back of the hand, and again striking the match, but waving only his hand. He also tried this for illusions of touch. Marking off a square on the back of the hand the eyes of the subjects were bandaged. Taking a finely ravelled thread he said to the subject, "We will try the area named first. I

am bringing the thread down toward it. If you feel it, I want you to tell me what the sensation is like. There, if any one were touching my wrist I should feel the lightest little touch imaginable. In a moment it might grow plainer as if a mosquito were alighting on the spot, and it might change to an itching as though a mosquito were just beginning to bite."

Similar suggestions of perfume may be given.

It is possible to work out extended lists of what might be done in the study of phases of child life in literature, art, and religion. To show something of this the following are suggested: A reading and discussion of personal journals and autobiographies such as the Journal of Marie Bashkirtseff, Pierre Loti's Romance of a Child, John Stuart Mill's Autobiography; childhood and adolescent phases of great men such as Yoder (50) published,—of the artists, musicians, inventors, engineers, soldiers, scholars, and statesman; of the child types of the literature of any given period: of those in the writings of any given author such as Dickens, Thackeray, Eliot, Stowe; of those in the art of any given period; of the Christ child as shown in the different Madonna pictures; and of those in poetry such as Field's, Longfellow's, Wordsworth's, Kipling's, and Stevenson's, and of primitive races. (49)

It has been the purpose in this paper to stimulate what Dr. Burnham has called "the spirit of the learner," to arouse interests, and to do something towards pushing to an indefinite distance into the future the time when the student shall have formed a hard and fast educational creed. Child-study has its contributions bearing upon the solution of the great problem of education, but so have very many other fields of knowledge. It is but one of many factors which must be taken into account in making up a final result. Greater certainty might have been expressed with regard to tests, and the probable results might have been indicated, but that would have been contrary to my general purpose which has been to suggest and start thought in right directions, not to tell what results ought to be reached.

I wish in conclusion to express my appreciation to President Hall, the faculty, and the librarian, Mr. Wilson, for constant courtesy and effort to aid in every possible way the work I have had in hand.

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THE ASSOCIATION OF IDEAS.

By FRANCES A. KELLOR.

The application of experimental psychology to sociology for the purpose of securing more accurate data, has been limited, and in the field of criminal sociology, the element of speculation is very large. No elaborate tests have been made, and the number has been restricted to those of taste, smell, sensibility to pain and a few others. These have been made by Lombroso and others in the European countries, and no series of comparable data exist in the United States. Although psychology has not yet reached that perfection in method which makes possible results upon all mental and emotional processes, the author believes that the ones involved in the tests of criminal women yield approximately accurate results. The subject matter for this investigation has included 55 students, and 61 white criminal women, and 90 criminal negro women. The criminals were tested in the prisons and reformatories in the north and in the prisons of the eight extreme southern states. Temporary laboratories were placed in the various institutions. The series of tests required about five hours for each subject, divided into different periods, and included the following:

Twenty-one cranial measurements similar to those used by Lombroso, together with numerous observations. The psychological tests included, reaction time to sound, acuteness of touch, color discrimination and preference, reading, hearing, fatigue, memory, least sensibility to pain, taste, smell, association of ideas, precision, and emotional reactions, as shown through the respiration curve. In this article are presented the results of only one test, that of association of ideas.

This is a test requiring about one-half hour, and is most instructive in showing the degree of associative memory, mental content, and quality of thought. The author gives the comparative results for criminals and students, and among white criminals has often found it necessary to separate the prison class from the workhouse class, as the averages showed wide variations. The prison class is not so dissipated, and has not the same degree of physical deterioration. Almost without exception, the workhouse class is inferior. Among the negro criminals, the prison class possesses much of the same characteristics as the workhouse class.

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The test is given in the following way: A word is given the subject, and she is requested to write whatever thoughts are suggested by it. The time limit is one minute. Only one word is written for each idea, and in this way large numbers of ideas can be recorded within a short interval of time. She is permitted to record any thought, whether connected with the original idea or not. The object is to obtain the registration of a definite train of thought within a given time. Thus, if the word dog is given, there may be a column of words, as "cat, lawn, tree, night, rain, disagreeable, party," which means that the subject's association is: "the dog chased the cat across the lawn, and it flew up a tree; cats howl in the night, so do the wind and rain, and it is disagreeable, and hate to go to a party on such a night." When the associations are completed they are analyzed, and the subject tells the thought and its connection, as seen above. The steps from one idea to another are thus laid bare. This process was fully as interesting to the subjects as to the investigator, and their co-operation was not difficult to secure.

There were from fifteen to seventeen words given in each test. These were divisible into four groups: The first consisted of words stimulating the sense memories, as rainbow for visual, thunder for auditory, ammonia for olfactory, sour for gustatory, and pain for tactual. It is not possible to secure a word which appeals exclusively to the one sense, and verbal association cannot be avoided. Thus, thunder sometimes suggested lightning, and pain the visual, as sight of an injury. The series of indirect stimulation to the sense memories is given for the purpose of determining which of the senses is most active in storing up material, for ascertaining the associative route, and for obtaining the rate of association. The second series was a duplication of the first, with this exception. Instead of giving a word for a stimulus, the sense was *directly* excited. At a given signal a color was exposed, a whistle blown, the odor of ammonia and taste of quinine given, and a pin prick administered. The object in giving the direct stimulus is to appeal to only one sense and note the degree of persistency. The third series included such words as mind, habit, and value—abstract terms, and marriage, religion, and work, less remote from experience. The object is to secure the content of the mind. These three series constitute free association, because the subject has no restriction upon thought. The fourth series is that of constrained association, and here she must confine herself to the subject given her. The ones used were, name the kinds of birds that you know, and give the causes of fire. The object here is to compare the rates of free and constrained associations.

The results of these tests, together with such explanations

as are possible, and their sociological value, include the following:

The accompanying table for the first series shows the rate, together with the degree of predominance:

TABLE A.

	Visual.		Auditory.		Tactual.		Olfactory.		Gustatory.	
	Av. No. of Assoc.	Per cent. Visual.	Av. No. of Assoc.	Per cent. Aud.	Av. No. of Assoc.	Per cent. Tactual.	Av. No. of Assoc.	Per cent. Olfac.	Av. No. of Assoc.	Per cent. Gust.
University Students,	10	7.1	10	1.5	9.8	1.6	9.	1.	10	2.5
Penitentiaries,	6.2	4.	6.3	.1	6.7	2.6	6.5	1.4	6.9	3.
Workhouses.	4.8	3.9	5.2	.2	4.7	3.	4.3	.6	4.	3.

The negroes are not included in this table, because the direct stimulation has proved more successful. It will be seen that in all classes the visual is predominant. The eyes are used most for storing up funds for memory. The auditory is second in importance, the tactual third, gustatory fourth, and olfactory fifth, except for penitentiary inmates in the last two. The second series corrects an inaccurate result in this one. Thunder did not prove a clear auditory stimulus, by reason of its close association with lightning (visual) and fear (emotional). The olfactory was unusually low, because ammonia did not give good results. To the working classes, found among criminal women, the use of ammonia, as for washing and cleaning, is more often recalled than its odor. Pain also secured better results from the criminal classes, probably because their experience is more extended, and they include grief, trouble, sorrow, as well as cuts and bruises and other physical causes of pain. In one of the penitentiaries an extreme case occurred. The woman was imprisoned for larceny, and had two children to whom she seemed devoted. Almost every association held references to them, and she frequently shed tears while writing. Her association for pain was: "children, home, mother, evening, undress, husband," meaning pain caused by being away from children, who were at home where she should be, she undressed them in the evening, but her husband did now. The consciousness of the pain of separation runs all through this, and yet this woman was an old offender, and repeatedly used her children in house pilfering when not in prison.

Owing to these unsatisfactory results, the method of direct

stimulation was devised. It is impossible to compare the results of this method with that of the students as in the first, as it was introduced late and the series is too small. It will be seen

TABLE B.

	Visual.		Auditory.		Tactual.		Olfactory.		Gustatory.	
	Av. No. of Assoc.	Per cent. Visual.	Av. No. of Assoc.	Per cent. Aud.	Av. No. of Assoc.	Per cent. Tactual.	Av. No. of Assoc.	Per cent. Olfac.	Av. No. of Assoc.	Per cent. Gust.
Penitentiaries,	7.1	6.1	6.9	2.5	5.9	3.2	6.2	1.3	7.	2.7
Workhouses,	5.5	5.2	5.1	4.1	4.3	2.7	4.8	2.1	4.1	2.6
Negroes,	8.7		6.5		7.8		7.		6.8	

that the results are not so uniform as for the three classes in the preceding. The largest number of associations for all classes is under visual, as is also the largest percentage. This means that the visual stimulus is followed longer than is any other. Among the penitentiary class and negroes the tactual is stronger than the others. The percentages of the negroes show that visual leads, tactual second, auditory third, and gustatory and olfactory about the same. They are not included in the table, for it was difficult to ascertain accurately just what the idea was, whether the association was a picture, a sound heard, or a distinct taste, etc. They are less able to distinguish the different sense associations and it is not possible to determine by them words alone. It may be purely associative without any distinct sensation being recalled. Among the workhouse classes, the associations show that smell and taste recall very few ideas, and soon change into visual. Even after a sharp whiff of ammonia or camphor, at the end of ten seconds, the idea of them is wholly lost and a new train of thought entered upon. Thus, an association may be for ammonia: "strong, sharp, don't like, washing, hands, prison, friends, out," which shows that the use of it in the prison leads to the idea of friends and release. It was more difficult to associate ideas upon direct stimulation, because the method was more difficult to understand. This may account for the lower rate. The high rate of the negroes is explained in connection with later facts.

The rate of association, which shows the capacity for associative thought, under a given stimulus in a given time, presents some interesting facts, and is given for all the series of associations.

TABLE C.

	Indirect Stimulation.					Direct Stimulation.					C'nstr'n'd.		General and Abstract Words.						
	Visual.	Auditory.	Tactual.	Olfactory.	Gustatory.	Visual.	Auditory.	Tactual.	Olfactory.	Gustatory.	Birds.	Fire.	Marriage.	Religion.	Work.	Punish-ment.	Habit.	Value.	Mind.
Students.	10.7	10.1	10.1	10.4	12.						12	7.4					9.	10.	10.3
Penetentiaries,	5.8	5.7	6.3	5.7	5.4	5.7	6.3	5.2	5.8	5.4	6.9	5.5	7.	3.1			5.7	7.6	5.9
Workhouses,	4.7	4.8	4.6	4.	3.8	4.7	4.2	4.	4.	3.1	5.5	3.9	4.3	3.4			4.8	4.4	4.4
Negroes,						8.7	6.5	7.8	7.	6.8	8.5	7.	7.9	8.6	8.7	7.4	7.7	8.2	5.2
Av. Pens. and Work. (White Crim.)	5.2	5.2	5.4	4.8	4.6	5.2	5.2	4.6	4.9	4.2	6.2	4.7	5.6	3.2			5.2	6.	5.1

An analysis of these results shows the following facts: With the exception of the negroes, the student's rate is nearly twice as great as the criminal's, and exceeds this when compared with the workhouse class. In only one instance does the rate for workhouse exceed that of the penitentiary—in religion. There is more of an emotional manifestation of religion among the former class. Unquestionably one reason why the white criminal's rate is so low is because of their difficulty in writing. The attention to the mechanical construction of letters and to spelling retarded progress. Among the negroes the rate is so high, because no subjects could be secured who could write with sufficient ease to take the test. In these cases the experimenter wrote the test as the subjects spoke the ideas. This indicates the capacity for thought just as truly, but places the white criminals in an unfavorable position with regard to rate. Another reason why the negroes' rate is so high is because their associations are so elementary. Thus under the word value they would often give the value of money and then of $100. Then for the rest of the time they would give various amounts as $50, $10, $5, etc., varying only the amount, not the idea. A large number of such associations can be named in one minute. Again, under habits, instead of giving any complicated thought they would name the various habits, as drinking, swearing, etc., a comparatively simple association. There were also tendencies to repeat this idea farther down in the test.

The second important reason for the difference in rate is that the deficient mental training renders the concentration weak. This makes the associative process disconnected, and sometimes many seconds would elapse before a new thought came. To the question "of what were you thinking during your silence?"

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the answers were: "nothing," or "confused," or "can't remember." This is true of the negroes, also, as the students exceed them in all the tests.

The third important reason is that the criminals consciously or unconsciously suppress the expression of thought more than the students do. Their attitude, due to the harsh, competitive life which they lead, is a defensive one, and they are constantly on the alert against any expressions which are to their disadvantage. When tracing out the connection between ideas, it often appeared that degraded thoughts or those throwing too much light upon the past life had been omitted.

The rate of the workhouse inmates is lowest because of all the classes, including the negroes, their lives have been most dissipated, and their energy and vitality recklessly consumed.

Under constrained association the subject of birds was comparatively easy, while that of the causes of fire was more difficult, and the differences in rate show this. The rate for negroes in causes of fire is so high because they included all things that would *make* a fire, such as different articles, while the students and many of the white criminals confined themselves to the causes alone. The criminal classes preferred to associate ideas under a definite word, as kinds of birds, while the students and best educated criminals preferred free association. The criminal seemed unaccustomed to the responsibility of independent thought, and was confused by the range given her. Among the students and best educated criminals the subject was not lost, but among the criminals and negroes, animals and other objects were included under birds and under causes of fire, and the idea was sometimes wholly lost, as "coal, sulphur, heat," then heat suggested loss of life, and food in order to live, etc. Both criminals and students gave subjective causes of fire. Objective causes are such as oil, matches and defective flues; subjective, such as hate, jealousy, fear, etc.

The next interesting fact in the association of ideas is the *route* of association. There are three shown by the tests. Reverting, where each idea has some relation, to the original word given. Thus, if rainbow is given, and all the colors in it are named, or it is said to be beautiful, or its legends are thought of, it is of this type. The second is the progressive, where one idea grows out of the preceding one, and the original word is lost. An illustration of this is: "*sour*, lemons, yellow oranges, no maid, waiting, late, Mr. B. cross, frightened, tired," which means that sour suggested lemons, and these yellow oranges which were had for breakfast, and there was no maid, so she waited and was late to class, and the instructor was cross, and she was frightened and tired. Here the last words are only related to sour through the progress of the associative

process. The third is a mixed form which includes the first two. Thus, "rainbow, color, red, green, clouds, heaven, hell, God, earth, sky, shape." Here the idea of rainbow is held for a time, then lost sight of and revived again in the last two words. Sometimes the associations are more mixed, and neither form is followed for more than one or two words. There are other forms less frequent, as where the ending of a word suggests another, as in rhyme; or where it is purely associative, as something in the knowledge or experience. But these are not independent thoughts as a rule, and are the product of one of these three forms. There may be breaks in the association, as where words are inserted without any reference to the preceding words. This shows lack of initiative thought, as where the subject looks out the window and writes the name of an object; lack of concentration; and characterizes all of the feeble-minded subjects.

As between criminals and students two facts are observable. The students show a much greater percentage of progressive and mixed associations, while the criminals of *inferior education* show a preponderance of the reverting type. The well educated criminals do not differ from the students. In the progressive associations complete trains of thought, experiences and whole scenes are reproduced, showing a more complex associative process. As an illustration of these differences are given the following: "habits, good, bad, overcome, reward, money, theater, party, drive, engagement," which is progressive and "habits, good, stealing, swearing, eating, drinking, bad, don't care," which is reverting.

The last, and perhaps most valuable data gathered from this test is the content of the mind, morally and mentally, which is revealed. The words selected for this test, complied with two rules, first that they be understood by both educated and illiterate; and second, that they be within the experience and stimulate the mental and moral experience of both classes. Mind and value often failed with the negroes, and work and punishment were substituted. The mental and moral conditions revealed cannot be clearly separated, but the general facts for the former are.

Students and educated criminals show the evidences of their education. Illustrations are: student, *pain*, "stab, Italian, Corelli, Crawford, Vendetta, Corsica, Bangs, Johnson, Boswell, biography;" *mind*, "intellect apart from body, divine, logic, sensation." White criminal, *mind*, work with, poor, my own, good times, freedom, negro; *mind*, "my own, no good, wish bright, quit thinking, crazy." Many similar illustrations could be given to show a further fact, that the criminal's association is

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more personal, that is, it is something in which her action or feeling have had a part.

The range of ideas with criminals is necessarily smaller. This is shown by the few ideas expressed, and by the repetition. Thus, under words like habits, good and bad may occur half a dozen times. If any one doubts that the negroes lack in range and depth of thought the most ample proof is afforded by their elementary associations. And yet the subjects selected were the brightest and best educated which the prisons of the southern states can supply.

The weaker mental power of the criminals is clearly revealed in the many ideas which seem to have no antecedents—or successors in logical association. In some tests made upon feeble-minded criminals this was the most characteristic feature. It would seem that the conclusion reached by Dr. J. Loeb through physical research, that the greatest intellectual power depends upon the greatest capacity for associative processes, is also corroborated from a psychological standpoint. This limited power is further shown by the difficulty with which they secured associations upon such words as mind and value.

Where the associations are written by the subjects, spelling and chirography can be noted, and of course among the criminal classes, both are imperfect. The choice of words shows a limited vocabulary, and the analysis shows that the words only imperfectly express the thought which the subject intended to convey.

The moral tone of the subject is revealed chiefly through the associations upon marriage, religion, habits and value.

With the student class marriage had only a theoretical content, and their associations were of this nature or embraced the experiences of friends. The greater portion of the criminals were married, and their thought reveals quite clearly not only their experience, but the moral and economic conditions under which they live. Where, for any reason, further details were required along this line, such words as children, home, happiness were given, and always brought the additional information. Illustrations are: white criminals: "happy, unhappy, fighting, travelling, entertaining;" "happiness, quarreling, separation, divorce." Negroes: "husband, dead, no relations, myself, no friends, nobody;" "want to be, good to husband, must be true, kind, affectionate, honest, and obliging;" "no move, brought me here, rather be home and work, treated badly;" "husband, he was bad company, and strayed away, from the Lord, hope to see him again, and fear God's anger."

The word religion secured one kind of data not foreseen. Between the students' and criminals' association there was one clear distinction. The former often included the content or the

ethical side of religion. The latter confined themselves almost exclusively to the form as the following show: Students: "prayer, heaven, peace, contentment, happiness;" "beautiful, good, safe, nun." Criminal: "sacrament, singing, choir, organ;" "church, going to church, holidays, good time." Negroes: "prayer, preaching, singing, shouting, seeming (to have religion);" "heaven, home, dress worth, often." Among the negroes there appears more of the ethical, or rather emotional type, than among the white criminals, and not infrequently they would cry while writing or giving their association. The following is by no means uncommon, and is given in full: "Am a woman of God, have been for 18 years, have had the peace of the Lord, who has forgiveness if we have faith until death, it is pleasant for the soul, wish could be free before going to heaven for try to do right, and trouble no one." The religion of criminals, both negroes and whites shows, that however acute the mental power may be in other lines, their religion is one of little progress, for it has all the features of a religion of faiths and superstitions and traditions, and little of the thought and utility which characterizes the Anglo-Saxon religion. For the most part the associations show that religion is a matter of the soul, and has little application to daily living. Thus, in a wish of a white criminal, there appeared a prayer for strength to destroy some one she believed an enemy. Violations against form, as not crossing one's self are serious, while violations of morality pass unnoticed. These associations thus throw light upon the statements that criminals are religious, but not moral, and that the two do not necessarily mean the same thing.

Habits further reveal the moral sense. The habits recalled in so short a time are naturally those most closely within memory's call, and come along the channel most open. Students sometimes enumerated their own habits, but more often lost sight of the thought of habits. Thus, "good, bad, my own, writing, this week, to-day, to-morrow, sister, thank her for the picture;" "concentration, good work, results, satisfaction, self-satisfaction;" "bad, visiting, bad, companionship, intruders, last night." In all of these the idea of habits is soon lost. It is interesting to note some of the things which the students consider bad habits, as biting the finger nails, visiting too often, not paying attention, carelessness in dress, etc. To the criminal class these have no meaning, and here is clearly shown how ideas and ideals are dependent upon the training. The criminal's associations included such habits as drinking, stealing, lying, bad company, scolding, lazy, snuff, tobacco, etc. Among the negroes especially, there were lists of associations including from ten to fifteen words, in which all of the ideas were of this kind. Occasionally good habits would be named, or regret expressed at their own habits.

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The preceding words produced good associations for the ideas were common in their lives. Value proved more difficult, and there were often failures. Among the white criminals, and especially among the negroes, the word reveals an interesting economic condition. The things considered of value were not only of small range, but were often the most common articles, considered from other points of view. Value in the abstract, they did not comprehend at all, and always applied it in the sense of cost, or personal desire. To distinguish these differences:—students: "worth, cost, frauds, bargains, New Haven, joke on mother, summer, cottage, seashore;" "note, bank, cashier, wife, moles, expression;" "money, exchange, political economy, Latin, laboratory, rain." White criminals: "jewelry, dresses, piano, hundred dollars;" "groceries, diamonds, rings, bracelets, money, dresses, shoes, church, circus, mules;" "life, friends, money, respect, strangers." Negroes: "watch, bed, rings, piano, house;" "dress, hat, shoes, underclothes, trunk, bureau;" "home, money, clothes, horse, farm, cow."

In all these associations there is shown limited range of ideas and elementary forms of associations. It will be seen that in both classes there are common human elements, but that each class reflects its own cultural, economic and social environment, and its own emotional and moral experience. One illustration will show this further. The author was privileged to measure in one of the institutions a very dissipated and immoral actress of excellent education and breeding, and coming from a home of wealth and refinement. Note in her associations how the two forces are constantly intermingled: *Habits:* "Smoking, eating, drinking, riding, driving;" *value:* "jewels, friends, clothing, furniture, horses, dogs, yachts;" marriage: happiness, fighting, travelling, entertaining; *mind:* study, brightness, fine, ill humor, jollity; *smell:* "fainting, a man, the flat, theater, 'Old Kentucky,' fighting."

When the results of these association tests are used in connection with facts gleaned from the other measurements, from records of institutions, and visits to habitats, and from such social facts as can be gleaned by other investigation, as family life, training, etc., they have a distinctive value. They tend to show, with the other facts, that the existing differences are not so much those between criminals and normals, as between educated and uneducated, and the environments surrounding each. These tests show wherever there is deficient education, and defective perception of the relations of things there cannot be the necessary co-ordination for successful functioning in relation to society. Anything which throws light upon the beliefs, habits, thoughts, emotions and experiences of this class opens the way toward a real understanding of the reasons for their failure in adjustment to society.

THE PRINCIPLES OF SCHOOL ORGANIZATION.

A COMPARATIVE STUDY CHIEFLY BASED ON THE SYSTEMS OF THE UNITED STATES, ENGLAND, GERMANY, AND FRANCE.

By CHARLES HERBERT THURBER.

INTRODUCTORY NOTE.

There is a mass of descriptive and statistical material about the great school systems of modern culture states, the descriptions being generally rather hard of comprehension for the uninitiated reader, the statistics meaning anything or nothing according to the methodology and teleology of their manipulation. So far as the mathematics and history of education have been laid under tribute for this study the best available sources have been employed.

Here and there we have in pedagogical literature references to the influence of the pedagogical development of one historical nation upon another, often, too, something in the nature of a comparison of this national system with that or the other. For the most part these references may be assigned to two, and only two, sources, having also two quite distinct purposes. The first of these is the genial enthusiasm of some youthful pedagogical cosmopolite who having made, generally in Germany, the discovery for which the world had long been waiting, of a more perfect, nay the only perfect pedagogical revelation, holds up the foreign model before the eyes of his countrymen with much the same spirit as that with which the Crusader pressed the cross upon the attention of the Turk.[1] To a more or less fanatical Chauvinism we owe the other common class of allusions to foreign schools which are made for the purpose of showing how immeasurably inferior they are to the native product. Between the Scylla of imitation and the Charybdis of execration there is a narrow channel,—few there be that find it—in which the aim is purely scientific.

I am far from denying that it is sometimes a good thing to

[1] Germans make similar discoveries. Note the remark in Deutsche Zeit. f. Ausl. Unterrichtswesen, 6, III, p. 223. "We have ceased to be regarded as the school nation par excellence . . . . the staff of leadership in education is believed to have gone over to France and North America."

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have our sluggish self-satisfaction roiled by the slipping in of a foreign model; if another nation has anything good we ought to know it, seldom, however, to adopt it unconditionally. Nor is it bad practice occasionally to execrate what is inferior to our own and to take heart of hope, seeing what we have achieved. But the aim of this brief study is somewhat different from either of those mentioned. No new descriptions will be attempted, no novel statistics have been collected, no oracular judgments are pronounced on any system or systems as a whole. The point of view is this: There are certain problems set for every people that undertakes to deal with school organization.

Moreover, such a study, dealing as it does with fundamental principles, should foster the acquisition of a philosophical attitude toward that wide field of interest covered by the term "organization of education." Lewes says, "every science has its metaphysic." If school organization were now a science this paper might be considered an essay in the formulation of the metaphysic of school organization. Perhaps, too, we shall see more clearly that education, as a system, is a development, a product of the evolution of society, and that if the form we have seems not quite to fit our highest conceptions, the way to better it is not by bartering what we have for what some one else has, nor by building a lean-to against our present structure. Further study might well be given to the basal problem for each country: how has the existing condition—system or lack of it—been developed out of the cooperations and antagonisms of universal prineiples and national peculiarities?

The work might easily be more comprehensive; the field is not all covered, not to say exhausted. But the aim has been to illustrate a method and spirit in pedagogical study, rather than to leave no stone unturned, no corner unillumined. Interesting as is the historical side of the subject, adorned with such great names as Plato and Comenius, Loyola and Luther, it has been left almost untouched, for the purpose here is not to give a history of school organization theory, but rather to sketch some of the fundamental principles which are now vitally operative in the chief educational states of the world.

The School as a Social Institution.

The organization of education is essentially as modern as the applications of electricity or the germ theory of diseases. Something that we call education has always existed in one form or another. In its various stages it has been, first of all, unpremeditated and unconscious, consisting of mere imitation of leaders, and the handing down of tradition; this stage has been followed by a conscious effort to pass on the best possessions of

one generation to the next; finally has come the stage of conscious organized effort for the attainment of definite results. The second, and even the third, of these stages has been attained by various historical peoples.

The education of the past was only for a favored few or for some special class. The formal education of China was for men; of Egypt and India for a favored caste; of Greece, and to a large extent of Rome, only for the men of an aristocratic class. In the middle ages formal education was confined almost exclusively to candidates for the priesthood, and only since the reformation has the idea been abroad in the world that education was a good thing for everybody. The idea that it was a good thing preceded far the idea that it was a necessary thing. In all these stages of education private initiative or church initiative was exclusively relied upon for the founding of the schools. The state did indeed occasionally step in, but only to a very limited extent. There was, speaking in general terms, no education provided by the state at the state expense until within the last one hundred and fifty years. While education was thus narrow in its scope, limited in the number to whom it applied, and inconsiderable in its material relations, there was no field for organization. The phenomenon of the development of an elaborate and complicated machinery to perform a simple and relatively unimportant task is not often met with in the history of social and political development.

The greatest developments in education took place during the nineteenth century. In observing the workings of contemporary school administration there are many things that give us pause, many acts of injustice, much ill-directed effort, much working at cross-purposes, much money unwisely spent. But do we find absolute perfection in church administration, for example, which has been developing for about nineteen times as long as school administration; or do we find a millennial completeness and beauty in our political organization and administration which has been in process of evolution for a much longer period? And if perfection is not found in these fields to which the human intellect devoted its attention almost exclusively through so many centuries, should we despair if we do not find perfection in this newest field of organization and administration? It has been found true, also, that the most perfect schemes, theoretically, that have been propounded and even adopted in the field of education, have not always worked to the best advantage. Absolute perfection does, indeed, seem to be alien to the human mind.

The great achievements of education in the nineteenth century may be summarized in three words: instruction has been made first, free; second, compulsory; and third, lay. It has

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been taken out of the exclusive control of the clergy, and it has been made open to all without regard to race, or sex, or sect, and it has been made compulsory upon all children up to a certain age. These three steps in progress, steps which have been taken substantially by all the great culture nations of the world, have lifted the school within the present century to the rank of the greatest of human institutions except government itself. The school is the only institution except government that reaches and influences every individual in the state. In spite of the occasional exhortations of eloquent enthusiasts, we do not, as a whole, sufficiently appreciate the magnitude of the school as a human institution. It is fairly safe to say that there is invested in school buildings and apparatus more capital than is employed in any single field of manufacturing, and it is quite true that the annual expenses of running the schools are larger than belong to any other field of government, unless it be the standing army in the great war powers of Europe.

A few figures will help the understanding. In the United States in 1896-97 the amount expended on public schools was about $200,000,000. The amount paid for pensions for the same year was $134,000,000. The total expenditure of the postal department for the same year was $90,000,000. The expenditure for the war department for 1897 was $48,000,000; for the navy department $34,000,000; interest on the public debt $37,000,000. The expenditure for education exceeded the total receipts from customs by about $50,000,000. The total number of children in the public schools was over 14,000,000; in private schools about 1,500,000; and in public and private secondary schools about 600,000; a total of over 16,000,000 exclusive of those receiving higher education, which amounted to some 200,000 more, the grand total reaching up to 16,255,000. The total number of teachers in the public schools was something over 400,000, an army nearly twice as large as that called out in our recent war with Spain. The great railway lines furnish perhaps the only branch of industry to be compared in extent with school keeping. In 1897 there were 823,000 employees of the railways of the United States, while the net earnings of the railways for that time amounted to $332,000,000. The aggregate amount of wages and salaries paid was $465,000,000.

These figures, will not, it is true, show so strikingly in favor of education when we take up the great European countries. There were in England in 1897 5,500,000 children on the school registers, and some 130,000 teachers of all kinds. The amount appropriated by the government was, in round numbers, $35,000,000, but it should be remembered that the schools

derive income also from endowments, school fees, local rates, voluntary subscriptions, and other sources, which amounted in England and Wales in this year, 1897, to about $50,000,000, making a total of $84,000,000. In Germany in 1890 the total number of children of school age was 8,694,000. No official statistics of the number of schools, pupils, teachers, etc., are issued for the entire German Empire. The number of elementary schools was estimated in 1891 at 56,560; of pupils attending them, 7,925,000; and of teachers 120,000. The immediate expenditure on elementary schools was about 242,400,000 marks, or something over $60,000,000. The amount expended for the army in 1894-5 in Germany was 617,764,000 marks, or about $124,000,000. In France the expenditure of the state on public instruction in 1895 amounted to 190,554,000 francs, or a little less than $40,000,000. The total number of pupils in the elementary schools was 6,261,000. France had in 1897, including Algeria, Martinique and Reunion, a total of 409 secondary schools, including lycées, communal colleges and colleges for girls, with 99,264 pupils. The receipts from the state, departments, and towns in these secondary schools in 1896 amounted to 37,274,000 francs. These are large figures, all.

Thus strikingly does Dr. Skinner put the matter:[1]

"The United States, to-day the youngest of all, is the only great nation of the world which expends more for education than for war. France spends annually $4 per capita for her army and 70 cents per capita for education; England, $3.72 for army and 62 cents for education; Prussia, $2.04 for her army and 50 cents for education; Italy, $1.52 for her army and 36 cents for education; Austria, $1.36 for her army and 62 cents for education; Russia, $2.04 for her army and 3 cents for education; the United States, 39 cents for army and $1.35 for education. England six to one for war; Russia 68 to 1 for war; the United States, 4 to 1 for education. The United States spends more per capita annually for education than England, France and Russia combined."

Instances might be given showing the large place played by education in great cities. In the city of Chicago the expenditure for education amounts to about $9,000,000 annually. There are between five and six thousand teachers in the city and upwards of 200,000 pupils. No other one department of the city government begins to approach in the amount of expenditures the public schools. In New York city the annual school budget is close to $20,000,000. These figures are not given as absolutely accurate, but as approximate. They are presented solely to show how vast a human interest education has become from the purely business side, and for this purpose they are convincing enough. It is needless to argue that proper

[1] In the Best Education for the Masses, Chas. R. Skinner. Proceed. Nat. Ed. Assn., 1897.

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methods of organization and administration are essential to the successful conduct of this great business.

The Form of Government and the School.

In general, educational organization corresponds to national forms of government and administration. In Germany and France there is extreme centralization; the greatest centralized system of educational administration in the world is that of France. The centralizing principle is the same in Germany, but there education is one of those affairs that is left to the individual states. The German Empire as such does not control education, but Prussia, Saxony, Würtemberg, Baden, Bavaria and the dozen or more minor states that make up the Empire, have each a centralized control, based in most particulars upon the Prussian model. England presents a modified form of centralization, if, indeed, it can be called centralized at all. There is a direct appropriation of money by the central government which is expended under governmental direction and in ways prescribed by the Committee of Council on Education. The control of the schools is brought about rather by the methods adopted for expending this money than by the assumption of any governmental prerogative to direct education. In the United States we have decentralization in its most complete, and, one might almost say, in its most aggravated form. So far as the national government is concerned the position is the same as in Germany.

The United States makes no direct appropriation for the support of the public schools, though it has set aside lands for school purposes and has made direct grants for certain educational objects, particularly for instruction in agriculture and the mechanic arts. The United States Commissioner of Education exercises no control over education at large, his duty being simply to collect and publish statistics and disseminate valuable information to the schools. But when we come to the individual states the analogy with Germany breaks down. While each state recognizes public instruction and provides a state superintendent with limited authority, the actual direction of school affairs practically resides in the smallest governmental division. Not satisfied with that even, the people of the United States have generally gone further and created a particular and minute governmental division for school purposes, namely, the school district. The evil effects of this district organization are clearly shown by Martin.[1] At present there is in the United States a clearly defined tendency to a larger

[1] Geo. H. Martin: Evolution of the Massachusetts Public School System, p. 114.

administrative unit in school matters.[1] The power of the central authority varies considerably in the different states. An interesting study might be made of this particular problem, the extent and variety of central versus local authority in school administration in our country.

We thus see that those nations which have strongly centralized governments, whether those governments be republican or monarchical in form, have also strongly centralized school administrations. Republican France has the most centralized administration of all; republican Switzerland has no centralization; monarchical Great Britain has a centralization with the starch all taken out of it; and the republican United States has the most extreme de-centralization. At the two extremes stand the two republics, France and the United States. It may be idle to speculate as to the relative merits of these two antagonistic forms of organization and administration, for as they correspond to national life and political organization they are not likely to be changed on purely theoretical grounds. Still, a brief consideration of the advantages and disadvantages of the two forms will be undertaken in the following chapters, for many unsettled problems cluster about the fundamental antagonism which these forms represent.

The Advantages of Centralization.

Of the advantages that inhere in a centralized system of school administration some are quite obvious, others must be sought below the surface. Without straining any relations the considerations that follow may fairly be arrayed in favor of the centralized forms.

First: Absolute uniformity may be secured throughout in the school system of the state. The administrative advantages of such uniformity are very great, so great as often to overwhelm every other consideration. Many if not most of the perplexing administrative problems in the United States today arise from the lack of this uniformity. Where the schools have a definite objective goal ahead of them which all must attain, uniformity in plan is very alluring. It must in fairness be recognized that some degree of uniformity has so far been found necessary in managing large bodies of teachers and pupils.

Second: School administration is eliminated entirely from local politics. In a strike in New York, Brooklyn policemen were sent to New York City, and New York City policemen to Brooklyn in order that they might do their duty toward the strikers free from the influence of personal associations and

[1] See Report of the Committee on Rural Schools (published by Nat. Ed. Assn.).

local ties. Some things must always be done in public administration that are distasteful and that cause anger and dissatisfaction in certain of the population. In the enforcement of the excise laws in New York State, for example, the matter has been placed entirely in the hands of a state board. The excise officers are thus strangers in the community, they have no friends to protect, and in a given town they have no political future which may be ruined by prosecuting violators of the law. Where centralization prevails an entire course of study is not likely to be overturned in a moment as the result of a passing wave of public prejudice, whim or fancy, nor is the teacher's, or principal's, or superintendent's position placed in insecurity through an often fanciful slight to some influential local magnate. Evils of this kind are too well known in our own country to require any further explanation.

Third: Centralization of administration prevents the adoption of serious changes in the curriculum until after long, careful and scientific consideration has been given to these proposed changes. It thus tends towards conservatism. An illustration is found in the reforms in the German higher schools instituted as a result of the Berlin conference of 1890.[1] There had been a somewhat general demand throughout Germany for changes in the system of higher education. Through the Minister of Instruction invitations were issued to nearly fifty prominent school men of Prussia who met together in solemn conclave for two weeks. The sessions of the conference were opened and closed by the Emperor in person. The eyes of the whole country were directed upon the doings of this body. It met with such authority, and under such auspices as have not favored the work of any educational commission in the United States. Reports of the meetings were published from day to day in the papers, and at the close the entire proceedings were issued in a great volume which forms a storehouse of pedagogical material. The changes that were finally adopted were slight, relatively speaking, and yet in the line of public agitation. The step taken was not a great one, but it was towards progress.[2]

Fourth: Centralized administration tends to bring a higher grade of talent into educational administration. In the first place, a seat in the cabinet is the highest position, ordinarily, within the reach of a citizen. The Minister of Public Instruction is generally an able and distinguished man, and the recognition of education by the government as one of the co-ordi-

[1] See the Higher Schools of Prussia and the School Conference of 1890, by C. H. Thurber, in Report of Bureau of Education, 1889-90.

[2] After ten years in which to try the effect of these innovations, the Emperor issued another proclamation on the subject (see p. 379) which has aroused educational circles, and may lead to another conference.

nate departments of administration in itself dignifies the subject. Further than that, where a curriculum is prescribed in some detail for the entire country by a small body, expert knowledge of the highest order is likely to be called into play. I notice, for example, that in the plan of studies of the French lycée, the work in philosophy is outlined by Paul Janet, and the other subjects are in the hands of men of equally high authority, though not so well known in the United States. The higher officers of education under these conditions constitute also a fairly permanent body who are enabled to inaugurate and carry out a definite programme of work impossible when position depends upon annual or biennial re-election by the people. The tendency in centralized administration is to place and to leave the direction of education in the hands of professional experts, prepared for their work by special and severe training. Even the British system with its partial centralization has been able to call to its administration a line of distinguished men of whom I need only mention Sir Joshua Fitch and Matthew Arnold. Indeed, on this whole question I can scarcely do better than to quote what Arnold himself says:

"I come, lastly, to the third point for our remark in continental education. These foreign governments which we think so offensively arbitrary, do at least take, when they administer education, the best educational opinion of the country into their counsels, and we do not. This comes partly from our disbelief in government, partly from our belief in machinery. Our disbelief in government makes us slow to organize government perfectly for any matter. Our belief in machinery makes us think that when we have organized a department, however imperfectly, it must prove efficacious and self-acting. The result is that while, on the continent through boards and councils, the best educational opinion of the country,—by which I mean the opinion of men like Sir James Shuttleworth, Mr. Mill, Dr. Temple, men who have established their right to be at least heard on these topics,—necessarily reaches the government and influences its action, in this country there are no organized means for its ever reaching our government at all. The most important questions of educational policy may be settled without such men even being heard. A number of grave matters affecting public instruction in this country,—our system of competitive examinations, our regulation of studies, our whole school legislation, are at the present moment settled one hardly knows how, certainly without any care for the best counsel attainable being first taken on them. On the continent it is not so; and the more our government is likely in England to have to intervene in educational matters, the more does the continental practice, in this particular, invite and require our attention."[1]

Fifth: Centralized administration permits of the immediate introduction of such reforms in the curriculum as have commended themselves to the conservative judgment of the educational authorities. Thus the reforms proposed by the school

[1] Matthew Arnold, Higher Schools and Universities of Germany.

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conference of Prussia, so far as they were adopted by the educational administration, were put into effect at once all over Prussia by ministerial decree. It did not take years of agitation and continual local combats and a long process of educating public opinion to bring these reforms about. Having been determined upon by the educational administration, they were at once put into effect, whether the local authorities thought well of them or not.

Sixth: Centralized administration tends to the organization of education on broader lines than is possible with purely local ends in view. Education is apt to be considered from the point of view of national service and value. The reorganization of education in France in the last quarter-century illustrates this point. It could not be expected that all the communes throughout France would realize after the disaster of the Franco-Prussian war the necessity of recreating their state by educational means. A few high-minded statesmen first recognized this, and by legislative enactment took measures for the education of France which were founded upon the highest political wisdom. Vast sums of money were expended for a purpose which was remote and somewhat ideal; the constant temptation to sacrifice the future best to the present good to which mankind so generally yields was put aside by these statesmen and the educational system reformed with the future best steadily in view. It is possible, then, under these conditions, for educational statesmanship of high order to develop. The best instance we have of this in our own country is probably afforded by the work of Horace Mann in reorganizing the school system of Massachusetts. It is true that he had comparatively little power, and that he was obliged to build up the influence of his great office; still, the work that he accomplished remains for all times a monument to us of what far-sighted educational statesmanship may accomplish for the schools of a state in spite of bitter opposition from short-sighted temporizers.

Seventh: Centralized administration relieves school officers of the continual struggle over curriculum and courses of study to which such a large proportion of their time must otherwise be given, and leaves them free to carry on the great work of teaching and to develop methods of instruction to a high order of perfection. This is substantially illustrated in Germany. Nowhere is there a more intelligent and active body of teachers than in the various German states. Germany has been the great home of pedagogy, whither, only a few years ago, all students from the United States who wished to study education were obliged to go. We may fairly ask the question whether the great development in methods of education which has taken place in Germany would have produced so many valuable re-

sults if the teachers, and particularly the principals of schools, had been obliged to consume a large part of their time in the discussion of the curriculum and of purely administrative questions.

Eighth: Centralized administration provides absolute rules for the qualification and appointment of teachers, removing these matters entirely from local influence, laying out a regular course of preparation for teachers and providing the institutions necessary to secure that preparation. A uniform standard of teaching efficiency throughout the state is thereby attained. The system of French normal schools is a fine illustration of this. Not only does the government provide normal schools for the instruction of teachers, but at the head of these normal schools stand two superior schools for the express purpose of preparing teachers for the normal schools themselves.

These are the chief advantages which seem to me to flow from a centralized system of educational administration. On the other hand we may inquire what the disadvantages of such a system are, or, to put it in positive form, what are the advantages of a decentralized system of education such as we have in the United States? The answer to this question will be the subject of the next section.

The Advantages of Decentralization.

As we have seen in the preceding section the centralized form of school administration offers many substantial advantages and puts forth strong claims for general recognition. Yet in the United States the centralized form has never prevailed, indeed, all attempts toward it have been bitterly opposed; and even in those countries where the acme of centralization has been reached we already see the beginning of a strong reaction towards decentralization. The decentralized form must then have some strong claims to put forward for popular favor, must offer advantages that in the minds of many quite outweigh those of the competing form. What are those advantages?

First: Analogy with other branches of administration is the most obvious if not the most fundamental advantage of the decentralized form, and of the centralized form as well for that matter. So long as the decentralized form corresponds to the general ideal of the people it is to a certain extent futile, of course, to consider the question of introducing a more centralized organization.

Second: Decentralization gives opportunity for individual initiative. This is, perhaps, the greatest argument in its favor. In place of a dull uniformity, there is a sprightly lack of uniformity, springing from the differences in individuals at the head of educational administration in different localities. A

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new idea in education may be adopted and put into effect at once and proved in a small area to be good or bad; if bad, its evil influence is not likely to be extended; if good, it becomes an object lesson for others. Thus, in place of a small number of experts administering the whole system, there arises a large body of talented individuals, each striving to do the best in his particular field, with every stimulus to personal exertion and every opportunity for the exercise of creative ability. There is a wider development if not a higher development of administrative capacity.

Third: Decentralization permits instant adaptation to local needs. There is some justice in the claim that where the people pay for the schools, they should have the kind of schools they want. Centralized administration may fail to provide adequately for the specific needs of individual communities. All general laws are apt to work hardship upon individuals. Decentralization avoids the possibility of such local injustice. Where local needs are real and based upon sound reason there seems to be no fair ground for ignoring them.

Fourth: Decentralization introduces a spirit of generous rivalry between different communities, which, so long as it remains generous, is wholesome. The elimination of a proper competitive spirit from modern society is as yet a dream of visionaries. Indeed, the old saying that competition is the life of trade is more respected to-day than it was a few years ago, though it has been given a larger significance and scope. Helvetius held that it was only ambition that made the difference in men and in nations. It certainly would seem that there are few individuals, few communities, few states which may be safely left to develop the highest degree of effectiveness without the spur of competition. Few men of ambition would be willing to be deprived of that spur; most men are only too deeply conscious of their need of it. A proper rivalry between states, cities and adjacent towns has been a mighty force in advancing education in this country.

Fifth: So far as teachers are concerned, decentralized administration offers the following advantages:

(a) Provisions may be made by which capable persons, who for various reasons may have been unable to pass through the stages of the prescribed course of preparation, but have yet acquired adequate education and have the gift of teaching, may be brought into the service of the community. There is no principle of justice by which such persons can be fairly deprived of this opportunity.

(b) Teachers have a better opportunity to react upon the conditions which create them and the powers which employ them. This reaction under a centralized system must at best

be very indirect and proportionately ineffectual. Under a decentralized system the teachers are able to get directly at the moving springs of the institution of which they form a part, and thus it is possible for them in considerable degree to modify the educational conditions under which they work. In any intellectual occupation such a reactive opportunity is highly to be desired. Action without reaction is contrary to the laws of nature.

Sixth: Another consideration in favor of decentralization demands a little more extended treatment. Decentralization favors the participation of all the interested social factors in the administration of education. These social factors or powers are the family, the community, the church and the state. Under strong centralized administration such as we see developed in France and in Germany, the state usurps practically the entire control of the educational system.

The question may even be raised whether the great achievement of the last century in producing universal, compulsory, lay instruction is to stand unchallenged for all time. If we take up the subject from an historical point of view, we find that the three social elements which have been crowded out of the control of the school by the state, namely, the family, the community and the church, are the very factors to which the schools have owed their development. The interest of the family can never be anything but most keen and vital in everything that pertains to bringing up children; certainly, it never ought to be otherwise. If it be true that parents do take less actual interest in educational affairs now than at an earlier period, the increase in centralized control may have to answer for this loss. To the efforts of the church schools in the beginning owed a vast deal, and the church has showed no willingness to abandon its share of school control. The common school originally owed everything to the community, for the origin of common schools is undoubtedly to be found in the banding together of a few neighboring families to secure better facilities for the education of their youth.

All these statements are as true of the United States, *mutatis mutandis*, as of the other countries we have been considering. The church in the early days of Massachusetts, for example, practically was the state. There are, indeed, few better instances of an ecclesiastical state than is to be found in the first century of Massachusetts life. In the United States there is to-day no little agitation of the question as to how the family can come once more into closer connection with the school. Women's clubs are taking up the question, and in many other ways the matter is being brought to public attention. Furthermore, the social life of the community as a whole seeks to

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find a way of impressing itself upon the school organization. A provision for this purpose was inserted in the so-called "Harper Bill" for reorganizing the school system of Chicago. By that provision school visitors were to be appointed from families residing in the neighborhood of each school.

While we have decided in the United States that education as supported by the state must be entirely disassociated from all ecclesiastical matters, yet it cannot be doubted that decentralized organization gives vastly greater opportunities for the participation in educational activities of the family, the community and the church. Sometimes this participation may take the form of annoying and even injurious interference, so that a public school system based on state support may occasionally resent this proffered assistance. But the question may fairly be asked whether it is not, on the whole, desirable that opportunities for such participation should be afforded to those great interests upon which education has historically been built. Interests which naturally and inevitably have to do largely with educational progress should be afforded opportunity to react upon the educational system of the country. Intellectual affairs grow and flourish best where a warm interest is felt for them, but this interest is enduring and effectual only when those who share it are not mere spectators, but are also fellow workers. Those who can advise, decide, lend a helping hand, interest themselves much more deeply and keenly for the progress of any matter than those to whom everything is sent down as a commandment from higher authorities, to whom everything flows from some external source. This applies as truly to the teachers themselves as it does to the family, the community and the church. Decentralized administration, then, enables justice to be done to all parties concerned in the progress of education. Even though the state dominates the situation, it does not entirely exclude from its councils the other great factors of society life.

It is curious and suggestive to note the past history and present status of this particular problem in the different countries we are considering. In Germany, for instance, where the most extreme form of centralization has existed, next to France, there is now strong agitation for decentralization. Professor Rein says, for example: "What the state does for education does not belong to its immediate duties and never will belong thereto unless the state interferes with the most inalienable rights of individual and personal freedom. The duty of the state is simply to bear itself helpfully, protectingly, and supportingly toward that which has been formed independently by free association. Otherwise, the state runs the danger of killing many flowers of progress in the bud; of produc-

ing by its uniform rules an opposition that will be highly dangerous to the state itself. One of the surest teachings of history is that intellectual flood tides cannot be held back by mechanical means, but where they are overthrown by external authority the death of all intellectual life is thereby sealed."

In France, too, which shows the most extremely centralized form of organization, there is at the present time a general movement toward decentralization, a movement which has been felt thus far chiefly in the universities, but which will doubtless extend to the lower schools. Compayré's views are, perhaps typical of the new tendency. He says: ("Doctrines of Education," Volume II.) "When we have agreed upon the principles, when we have recognized the necessity of instruction, it still remains to discuss the practical means which may assure its progress. The first of all is to leave more of initiative to individuals, more liberty to the communes, to the small aggregations of men which are united by common interests. In the United States it is the individual states and the communities which take charge of the organization of schools, regulation of methods, and the supervision of teachers. Would the cities of America make such large expenditures for instruction if they were not themselves the masters who regulated in their own way and according to local interests all which concerns the instruction of the children? There it is not only a few hundred inspectors scattered over the surface of the territory who watch over national education; it is six hundred thousand teachers who, divided into committees selected by election, share the care of supervision and inspection. Let the state, then, make a larger appeal to the initiative of the communes. Let it not demand absolute uniformity in methods. Let it take account of the diversity of needs and it will more and more see the citizens co-operate zealously for the accomplishment of the serious task of popular instruction."

The history of England gives us a different picture. There the state, as it favored free trade and left economic conditions free, also regarded the realm of culture and education as a free field into which it might not enter. But they have broken more and more with this view in England since the middle of the nineteenth century, and have recognized the idea of state organization as necessary for the educational system; so that now the agitation in England is chiefly in the direction of greater centralization.

Centralized France is moving toward decentralization; centralized Germany in the same direction; decentralized England is becoming more and more centralized, and centralization is making progress in the United States. It may fairly be ques-

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tioned whether it is not possible to so combine centralization and decentralization as to secure the essential benefits of both without sacrificing the most important advantages of either. It is upon this problem that much attention may profitably be directed in the near future.

Secondary School Organization.

In secondary education we reach a more debatable territory. Two quite antagonistic doctrines prevail in regard to secondary instruction. That it is for a special class only, not necessarily free, and designed to prepare specifically for some higher career is the older view, everywhere prevalent half a century or less ago, and still dominant in the states of Europe. From this standpoint the duty of the state toward education fully ceases when common school instruction has been provided, and advanced education should be procured at parental expense. That secondary education should be free and accessible to all, should reach as many as possible, and should aim to give a certain amount of additional instruction of the best nature possible to all who have the leisure to obtain it, is the more modern view that underlies the public high school in the United States. These two theories of secondary education are incompatible in the same national system.[1] Where the latter view prevails, as in the United States, the former is represented, or at least is generally considered to be represented, by private schools of different kinds. These two ideas do therefore exist side by side, but they have not been, and probably cannot be incorporated together into a national school system.

It is largely if not altogether on account of these different views that we do not find the period of secondary education conforming in its space and time limits in the different countries. Under the first view, that it is for a special class and to prepare for specific careers in life, the pupil must be caught early and segregated from the masses; so we find the period of secondary education beginning in Germany at an early age. This view is much less prevalent in France, and the different divisions of secondary education there rest upon a common foundation up to the sixth class, that is, to the beginning of the eleventh year. It is, however, only in the United States where the second view fully prevails, that we find secondary education joining itself to a uniform preliminary course and beginning at a somewhat advanced period.

It may be noticed in passing that there are disadvantages in this arrangement of secondary education in the United States

[1] In the country where the first view is most strongly held, Germany, secondary education is not a recognized division but is included in higher education.

which are not felt under the arrangement in France or Germany. Covering only the short period of time between the close of the grammar school course and the beginning of the college course, secondary education in our country is subject to pressure from both sides. The whole process of differentiation which takes place in France and Germany either at a very early age or progressively, in the United States is thrown entirely into the secondary schools. Here the pupil must decide, or some one must decide for him, whether or not he is to go later to the college or university, and this decision in itself is an important one for the school work since it determines whether the pupil's course of study is to be dominated by college entrance requirements, by the needs of some business, or by the purpose to attain the most liberal culture possible within the time limits.

If the pupil has decided to go to a higher school, then the further question arises which school shall he enter? As the requirements for admission to different schools have been varied, the settlement of this question is again a great difficulty to school authorities. If the recommendations in the report of the Committee on College Entrance Requirements are generally adopted, much of this difficulty will be removed. The secondary teacher in any given school in Germany or in any given class in France has a great advantage over the secondary teacher in the United States in knowing precisely what the pupil is aiming at. There need be no hesitation as to the method and subjects. These are, indeed, prescribed, the career of the pupil is fully marked out, and the great work of sifting pupils for different careers in life is taken entirely off the hands of the secondary teacher.

One of the great achievements of this century in common school education has been making it free. We find a contrast to this in secondary education, which is not free in any of the foreign countries we have been studying. In Germany the fees of secondary schools are very considerable, for example, in the catalogue of the Berlin Gymnasium zum grauen Kloster, the statement is made that the school fees amount to 100 marks, or about $25 a year, to be paid quarterly. The amount is sometimes more than this. In France the tuition at the lycée varies from 80 to 200 francs, added to which, of course, is the cost of board which amounts, in the highest division of the Lycée Louis le Grand, for example, to 1,500 francs. In England the cost at the great public schools, which furnish all the secondary education worth mentioning in that country, is much greater. At Eton the cost is about £200 a year, including board. It is, therefore, only in the United States that free secondary education is provided. Upon what

grounds are we justified in providing such free secondary education?

An interesting answer to this question is given by Frank A. Hill, Secretary of the Massachusetts State Board of Education.[1] From his first argument I quote the following:

> "And so freedom of choice, when the question of what one's life work shall be comes up, is a basic thing in government by the people. Upon the wisdom of this choice turns the welfare of each unit in the state and therefore of the state itself. So vital is the connection between the individual's choice and the state's integrity, so essential to wisdom of choice is one's awakening to his own capacity and one's vision of the prizes that are possible to such awakening, that no state can afford to suffer its children or any portion of them to grow up without this revelation of themselves to themselves and without this stimulus from the splendid visions of a larger usefulness and a finer happiness.
>
> "And so the total result of the process when people in general try to make something of the opportunities which are theirs under a wise government of their own is an uplift of the state through an enlargement and stimulus of the state. It is the essence of democracy—this freedom of intelligent initiative and push by the individual along the lines of his taste or capacity, a freedom that permits him to rise from the lower plane to the higher, if he can and will. So good a thing is such freedom for the individual and, therefore, for the state, that the public should spare no pains to keep the avenues of ascent open. If free public education of a high order keeps these avenues open—and with all its imperfections it seems the wisest scheme for this purpose that human ingenuity has yet succeeded in devising—that settles the wisdom of having it."

The importance of this freedom of choice becomes more striking when compared with the situation in France and Germany. There the choice is made forever at an early age. This choice once made, there can be no variableness or shadow of turning. Either the child is elected to belong to the classes, or doomed to remain with the masses; and as secondary schools are pay schools, the choice depends primarily not upon talent or intellectual ability, but upon the financial ability of the parents. This fact is recognized by German educators. It is only recently, indeed, that the common schools of Germany have been free and have ceased to foster class distinctions. Even yet, as we have seen in our discussion of the universal common school, there is in the organization of these common schools enough of differentiation left to cause serious discussion. It will therefore be some time at least before any reorganization of their higher schools doing away with class distinctions can be looked for. In France the continual struggle that has been going on to postpone the period of bifurcation in the higher schools, and the very slight difference that exists in the priv-

[1] How far is the Public High School a Just Charge upon the Public Treasury? School Review, Vol. VI, p. 746.

ileges which the different diplomas open up to their holders, clearly show the appreciation of this danger in that country and the movement towards its remedy.

Another argument in favor of the high school is that it exerts a powerful stimulus for good upon the schools below. Again I quote from Dr. Hill, who has stated this point so well that it is hopeless to attempt a better statement:

"One well recognized and valuable fact is this, that the high school exerts a powerful stimulus for good upon the schools below. It holds up before the young ideals of higher and broader scholarship; it is the gateway to otherwise inaccessible realms beyond; it appeals to the ambition of the young; it appeals to this ambition at a critical time when it is important that inferior ambitions shall be forestalled; it is a golden strand in that interest which holds the young up to scholarly endeavor. It fits in with the thought that noble inspiration comes from above, not from below, that normal children respond better, not when they are pushed from beneath, but when they are drawn from on high. The longing for higher things thus aroused, the children do better work in the lower schools; they are more readily guided; they hold to a definite course more steadily. Indeed, it is as true of the mind as of any ship that sails the seas that it must have momentum to obey its helm. If this ambition to attend the high school is, in some measure, imitative—a mere spirit to do as others do—it is, in a larger measure, a spirit to study for study's sake or for the rewards that study brings. It is not surprising, therefore, that school committees, with scarcely an exception, should bear witness to the bracing influence of a good high school upon the grades below, experience thus confirming what theory would lead one to expect."

That this is not a merely sentimental argument, all educational history shows. The universities have stimulated the secondary schools, and the secondary schools again have reached the schools below them. This movement is nowhere better exemplified than in our own country. The higher schools exert no such stimulating effect upon the lower schools in Germany, or, indeed, in France. There this intellectual stimulus is replaced by compulsory laws and by the special prizes in the way of desirable careers in life that may be won only through the higher schools.

Here, however, comes in the question as to the good or ill effect, the advantage or disadvantage of this clear distinction into elementary, secondary and higher education. The growth of man is, after all, a continuous process, and the development of the individual is an organic evolution. Any arbitrary subdivision of the periods of education tends to destroy the conception of this unity, and, furthermore, tends inevitably to develop the spirit of class distinction. More than this, what Mr. Hill calls "the seductive pause" between the grammar school and the high school, the fact that at this particular point such a large number of pupils leave school, that only a few either can or will go on to the higher school, tends to break down

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educational unity and weakens the hold of the higher school upon the people. The reservation of a select few precious branches of knowledge for the higher schools without even allowing the lower schools a taste of them not only tends to create an aristocracy of learning, but also robs the lower schools of treasures that rightfully belong to them. The more a school system is regarded as an organic whole the less chance there will be for public opposition to paying money for secondary education.

The conditions for admission to the secondary schools of the different countries are apparently somewhat vague. I do not find, for example, in the catalogues that I have examined of the German Gymnasia, any definite statement of requirements. A statement made in one programme is as follows: The examination and reception of new students will take place on a certain day, scholars will present testimonials of dismissal from the school that they have visited before, as well as a certificate of vaccination. The entrance requirements are naturally much simpler and admit of less formulation where the child enters the secondary school at an early age. In the United States there has been some conflict over the question of admission to the high school, one party adhering vigorously to an entrance examination, the other party willing to admit on certificate from the lower school. The latter practice now generally prevails. In European countries, without exception, the egress from higher educational institutions is much more carefully guarded than the ingress to those institutions. It is comparatively easy to get in, but hard to get out with a certificate or degree.

The reasons why pupils attend secondary schools are hereditary, social, economic, ethical. Parents who have enjoyed a certain education themselves and occupy a certain social position quite naturally desire that their children should follow in the same path. How much of the child's own tendency in that direction depends upon heredity and how much upon its constant environment from earliest days is a question. A certain number of people, also, always covet the best things because they are best. The desire for a higher education springing from a thirst for knowledge is not so uncommon in the period of adolescence as pessimistic valetudinarians would sometimes have us believe. These two influences, the hereditary and the social, are forceful in varying degree in all peoples. The social reason has been most strongly felt in the older civilizations where rank and caste have come to be somewhat definitely defined. The attendance upon the higher schools in Germany, for example, is practically the privilege of the aristocratic few. Certainly, those who possess a higher education are forever

marked off by social boundary lines from those who do not possess that advantage. The economic reason for pursuing higher studies lies in the fact that these constitute the gateway to the professions, and, in foreign countries, to the higher posts in the civil service, in short, to what are considered the most desirable occupations of life outside of trade and commerce, and even there a higher education is demanded for the better class of positions.

Differentiation in the Secondary School.

The elementary schools, in Germany especially, have a problem of their own as to whether there shall be one universal elementary school, which, so far as it goes, shall be attended by all scholars, or whether there shall be a separate preparatory school for those who are going into the higher schools. In secondary education this problem becomes far more complex. The time obviously must come when students will differentiate according to (a) the professions or careers in life which are picked for them by their parents; or (b) their own natural aptitude and predilections.

Where the secondary school has a long course and begins at an early age, as in Germany, the choice, which must be made by the parents, is in no small measure determined by pecuniary ability to pay the fees. The postponement of this choice to such an age as will enable the aptitudes and endowments of the student to be taken into consideration has been a matter of serious consideration by the educational world.

What fills the place of secondary education in Germany has been well and often described, best of all by Russell in his German Higher Schools. There is a complete "trifurcation," shown in three distinct institutions: the Gymnasium, ancient and classical, the Oberrealschule, modern and scientifically disposed, and the Realgymnasium, a half-way-between affair, would-be mutual friend, but really mutual enemy. Each type has a nine year's course, and each is planned to catch the pupil when he is nine years old. Once started in any one of them the pupil has no chance worth considering to switch over into either of the others. Often there is only one type of school in a given locality, the three courses never being found under the same roof.

Six years in any one of these schools gives the right to the one year so-called "volunteer" military service, a privilege dearly prized and often dearly purchased for a favored son by pathetic sacrifice on the part of the other members of the family. At the end of these six years hosts of students quit school. The military privilege is practically the only common advantage which these schools offer. There is a very complete and inex-

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orable code of "privileges" attached to graduation, really amounting to tremendous prizes. Of these prizes the gymnasium has more than a lion's share. To put a boy at nine into any other school than a gymnasium is practically to shut him out then once and forever from the most attractive professions. So long as the gymnasium retains this monopoly of the highest prizes of life in Germany, its opponents may rage in vain.[1]

In the Frankfort plan an effort has been made in Germany, and received with approbation, toward the solution of this problem by postponing the choice for a number of years after entrance upon the higher schools. This, however, does not remove the fundamental objection that the choice of any higher career at all for the student must be made by the parents at about the age of nine.

In France there has been a long history of development along this line, which it may be well to sketch somewhat more in detail. There are three types of secondary schools in France, the lycées belonging to the state, the city colleges, and private schools, the latter being part lay and part Catholic. But there are no important inner differences, so far as the plans and aims of instruction are concerned, in these three schools. The lay private schools have fallen off notably since 1880, and now very few of any importance exist. Secondary instruction in France is based upon the statutes and regulations of Napoleon I, by which the University of France was created between the years 1801-1808. Before the Revolution, instruction was based upon the study of Latin, and the monastic orders, chiefly the Jesuits, constituted the great majority of teachers. We have already seen something of the efforts made in the Revolution for elementary schools. The Constituent Assembly did decide in 1791 for the creation of a system of public schools which should be free to all citizens, and in September, 1793, the Convention decided that besides these schools there should be three other orders of instruction provided for by the state: first, for artisans; second, for other classes in society; and, third, for the pursuit of those subjects of instruction whose serious study was not attainable by all. This third step corresponds to the present conception of secondary education.

These schools were to be called institutes and to consist of four classes. The two first should be parallel, and the others

[1] No less a person than Emperor William, however, fairly recognizes the injustice of this gymnasial monopoly. A decade ago, shortly after he ascended the throne, by a decree he started the only effective educational reform in Germany for a generation. As king of Prussia he is in position to bring things educational to pass in that state, while what is done there becomes, by reason of Prussia's general influence, a measure of what is likely to be done in other parts of the Empire.

so planned that they could be attended together, or one at a time. The subjects were: In class first, mathematics and physics; class second, morals and politics; class third, applied mathematics and physics; class fourth, literature and the fine arts. This plan of Condorcet remained on paper.

Next came Lakanal's plan of a central school with a rather highfaluting programme embracing mathematics, physics, experimental chemistry, natural history, agriculture and trade, original psychology, political economy, jurisprudence, philosophy of history, hygiene, arts, grammar, belles lettres, ancient and modern languages and drawing. Some order was brought out of this confusion by Daunon, the proposer of a law in 1795 in which he divided the scholars of the central school into three grades, and the subjects of instruction also into three grades. Pupils from the twelfth to the fourteenth year were to pursue drawing, natural history, ancient languages and elective modern languages; from the fourteenth to the sixteenth year they were to pursue mathematics, physics and chemistry; from the sixteenth general grammar, belles lettres, history and jurisprudence. The preponderance of the realistic studies and the philosophical tendency of these programmes denote their revolutionary character.

The success of these schools was very moderate, largely on account of incapable teachers. Only a few of them could later be changed into lycées. It is to be noted, however, that these programmes have the germ of the tripartite division which still exists in France in higher education, namely, a literary and classical instruction with Greek and Latin, classical and realistic instruction mixed, and realistic instruction with modern languages.

By the law of the first of May, 1802, the lycée was substituted for the central school. The decree of the 10th of December, 1802, says with true Napoleonic directness, "In the lycées Latin and mathematics shall be chiefly taught." Latin and mathematics still remain the backbone of the secondary instruction in France. The whole educational organization has not broken with the plans of Napoleon.

Under the Restoration, in the programmes followed from 1815 to 1821, there was a violent reaction in favor of the classical and against the realistic studies. History was despised, philosophy was to be regarded as the completion of rhetoric and to be taught in the Latin language. Public opinion, however, drove the administration to more liberal rules which were introduced in 1828 by Minister Vatimesnil, to whom is due the introduction of elective instruction in the modern languages in the lower classes and permission to introduce special courses, *cours spéciaux*, in favor of those scholars who had no taste for classi-

cal learning. Here is a germ of the realistic instruction, *enseignement spécial*, later called *enseignement moderne*. The development of these courses was favored under the government of Louis Phillipe. After the Revolution of 1848, thanks to Minister Carnot, the question was first raised of the overloading of the school programme and of differentiation according to the needs of the scholars.

The solution of this whole question lay in bifurcation, separation into the classical and the realistic programmes. The plan of Fortoul, 1852, separated the classes of the lycées and colleges into three grades: first, the elementary classes, eighth and seventh, with the same plan of instruction as the common schools, except that Latin was given in class seven; second, the grammatical division, the same for all scholars; besides Latin Greek was taught in class six, then modern languages, French, history and geography, geometry and arithmetic; third, the higher division in which the lessons in French, Latin, modern languages and history remain common, but the remaining subjects from class three to the class in logic—the term philosophy being unacceptable, but logic corresponding to the present class in philosophy—formed two separate divisions which led to a humanistic and realistic bachelor's degree (baccalauréat ès lettres and baccalauréat ès sciences). Commenting on this arrangement, M. Stropeno, one of the editors of the Revue Internationale de l'Enseignement, says that it was certainly altogether too symmetrical to be practical, and yet can be defended on pedagogical grounds.

The putting of this plan into operation was prevented by petty rules based on mistrust. The teachers were fettered by the regulation of their work down to the very minute. They were practically compelled to be as superficial as possible in their attainments, since only two categories of teachers, humanists and realists, were recognized. So there were two sorts of maids of all work. The reason of this, as given in the ministerial report of the 19th of September, 1853, was to preserve them from idle investigations, vain subtleties, and false pride in individual ideas! The teachers, too, had to wear the official dress all the while, and shave their beards. Is it any wonder that the most gifted soon forsook the calling? This went on for ten years, during which rich and independent people sent their sons into the schools of the priests which were opened everywhere after the monopoly of the state was abandoned in 1851.

A change was made by Minister Duruy who took office in June, 1863. Favored by Napoleon III he again restored the name philosophy to the highest class, shoved the bifurcation ahead from class four to class three, where it soon practically

disappeared, elevated the teaching of modern languages by providing special teachers, emphasized instruction of history in the lycées, and organized realistic instruction so that it was advantageous for trade and industry. It is interesting to note that he also founded at Cluny a special normal school to prepare teachers to give this realistic instruction. This institution is now closed, the special examination for real teachers done away with, and the name *enseignement spécial* also.

The next great improvement was made by Jules Simon, whose circular of the 27th September, 1872, and book on *La réforme de l'enseignement secondaire* are epoch making and form the basis of the present condition of the question. Most notable points of his plan are the addition of a course in geography and living languages, increased instruction in the vernacular, diminution of Latin verse and Latin themes and general diminution of written work. He also was the first to introduce monthly teachers' conferences in every lycée. There was a reaction, and in 1874 a new plan was promulgated in which the real studies were less prominent. In 1880 Jules Ferry introduced another reform which was based upon the ideas of Simon. In 1890 new instructions were published touching various matters of detail. So much for a brief and far from satisfactory sketch of a field of school-programme evolution that in all its details is worthy of the careful attention of students of secondary education.

In England, in almost all the greater schools, there are at least two chief divisions, the classical side and the modern side. Along with these, according to the character of the schools and the careers for which they prepare, we find a military side, army class, commercial class, science or engineering department. There is no such separation of the schools as in Germany. There is a uniform substructure with a late bifurcation according to the local needs of the school. In the larger cities, many schools, as in Leeds, have strong commercial tendencies. In the schools of North England, the technical branches and natural science are particularly favored. Some schools, as Cheltenham, make special preparation for military examinations, and so on. The different divisions of the school are shown in the arrangement of Clifton College, for example. From the eighth to the eleventh year constitutes the preparatory school; from the eleventh to the fourteenth the junior school; from the fourteenth to the nineteenth run the three divisions, classical, modern and military. The differentiation, therefore, is postponed until the fourteenth year. To be more specific, when a boy is eleven years old he must leave the preparatory school and enter the junior school. He then generally goes into a parallel class, his transfer from the preparatory to the junior school

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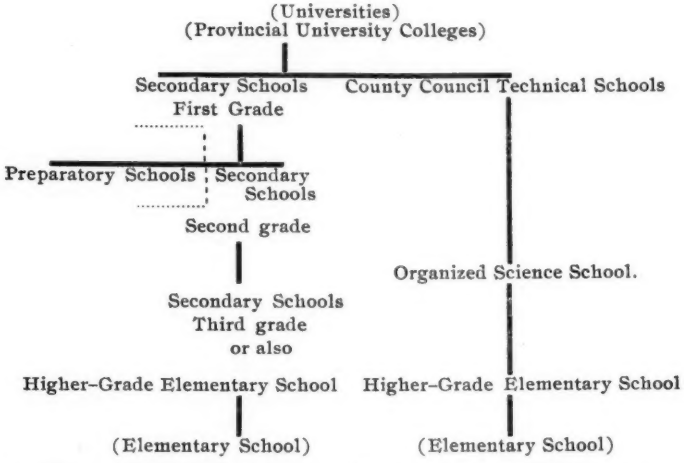
being not dependent upon his attainments, but upon his age. In the junior school he remains until fourteen, when again he must leave that, for he is now too old for the junior boys. Then he goes into what is called the higher department, where he often enters a parallel class to the one that he left in the junior school.

This emphasizes the fact that in England the common fashion of dividing schools is according to the age of the pupils at leaving the school. This kind of division was first made by the Commission of 1861 to 1864, and has been maintained in spite of all criticisms by the last commission. According as the pupils leave the school at the age of 19, 17, or 15, the schools are divided into first, second and third grades. The first two are oftentimes designated as higher and intermediate secondary schools. The schools of the third grade are closely related with the higher common schools, and can scarcely be differentiated from them. The schools of the highest grade prepare their scholars for the higher callings of life, military, civil service and the university. They keep their pupils until the eighteenth or nineteenth year. The schools of the second grade prepare particularly for mercantile, industrial and agricultural life, and dismiss their pupils at the age of sixteen or seventeen. The schools of the third grade, the age limit being fourteen or fifteen, fit boys for the workshop and the store. To the schools of the first grade belong the great public schools, all the best endowed schools, the great corporation schools and a large number of the private schools. There are also preparatory schools which take sons of the better classes up to the age of about fourteen and make them ready for the schools of the first grade. The school hierarchy may be represented, in a way, by the table (after Baumeister) on the next page.

This table is somewhat schematic, and of course does not represent the succession of institutions which any individual has to go through in order. Clever elementary school pupils who have made quick passage through the higher grade elementary school may receive a stipendium and go immediately to the secondary school of the first grade, skipping the intermediate ranks. From what has already been said it is clear that there are in England no differentiated classes of higher schools which correspond to the German Gymnasien, Realgymnasien and Realschulen. All are grammar schools, originally purely classical and corresponding to the Gymnasien, which have in modern times developed more or less important modern sides.

The particular question of bifurcation is, in the United States, owing to the loose organization of education and the lack of class distinctions, of far less importance than in Germany,



France, or England. And yet it cannot be said that we have escaped the problem altogether, or that its solution has still been absolutely determined in this country. This problem in our country, however, is a modern one growing out of the rise of the great public high schools. It has been felt that "it is unwise, impracticable, and impossible to divide the pupils in our public high schools into two distinct classes, the one preparing for college and the other for life." Here the secondary schools are the schools of the people. "Throughout the course of secondary instruction, surely there must be no Procrustean bed which every pupil by some process of stretching or dwarfing must be made to fit. Natural endowments as soon as discovered should have full sway within certain limitations. College courses ought to be so adjusted that every pupil at the end of the secondary course, recognized as excellent both in quality and quantity of his work, may find the doors of every college swinging wide to receive him into an atmosphere of deeper research and higher culture along the lines of his mental aptitudes."[1]

There is a growing sentiment that the solution of this difficulty is to be found by a wider introduction of elective courses into high schools. The Committee of Ten in its report published in 1893, in commenting upon its final programme, takes the matter up as follows: "Many teachers will say, at first sight, that physics comes too early in these programmes and

[1] A. F. Nightingale in the School Review for June, 1896.

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Greek too late. One member of the committee is firmly of the opinion that Greek comes too late. The explanation of the positions assigned to these subjects is that the Committee of Ten attached great importance to the two general principles in programme making:—In the first place they endeavored to postpone till the third year the grave choice between the Classical course and the Latin-Scientific. They believed that this bifurcation should occur as late as possible, since the choice between these two roads often determines for life the youth's career. Moreover, they believed that it is possible to make this important decision for a boy on good grounds only when he has opportunity to exhibit his quality and discover his tastes by making excursions into all the principal fields of knowledge. The youth who has never studied any but his native language cannot know his own capacity for linguistic acquisition; and the youth who has never made a chemical or physical experiment cannot know whether or not he has a taste for exact science. The wisest teacher or the most observant parent can hardly predict with confidence a boy's gift for a subject which he has never touched. In these considerations the committee found strong reasons for postponing bifurcation, and making the subjects of the first two years as truly representative as possible. Secondly, inasmuch as many boys and girls who begin the secondary school course do not stay in school more than two years, the committee thought it important to select the studies of the first two years in such a way that linguistic, historical, mathematical, and scientific subjects should all be properly represented. Natural history being represented by physical geography, the committee wished physics to represent the inorganic sciences of precision. The first two years of any one of the four programmes presented above will, in the judgment of the committee, be highly profitable by themselves to children who can go no farther."

The more recent Report of the Committee on College Entrance Requirements contains no recommended curriculum, and avoids the problem that caused its predecessor so much trouble by a rather tacit but none the less complete adoption of an elective principle which, carried to its logical conclusion, can only mean the construction for each pupil by the pupil, parents, teachers and principal of an individual curriculum fashioned to suit individual needs. This individual curriculum will be made up out of the separate studies which the school is able to offer. The external conditions modifying school freedom in regard to studies are essentially different in the United States from those in Germany, France occupying an intermediate position between the two. In this I refer to the system of privileges and the like, which in Germany exercises a tyran-

nical domination over the schools, in France has far less influence, and in the United States is scarcely felt except in college entrance requirements which are becoming more elastic every year. In England, secondary education as a system can hardly be said to exist at all, and therefore the problems in this field that have occupied other countries and called forth various solutions, receive no light from English experience. The new law which went into effect April 1, 1900, for the first time brings secondary education into organic connection with the state system, but the results can scarcely be predicted. In Germany there has already gained some headway a movement looking towards the postponement of choice along lines similar to those of the French tinkerings of the past thirty years. The Germans, however, have progressed no further than to begin French instead of Latin on entrance to the higher school, so that not until the third year do pupils reach the point of "bifurcation" where choice must be made between the Gymnasium or the Realgymnasium. This is a gain, and the spirit shown is more significant than the attainment already made. Even this modest reform is by no means generally popular as yet.[1]

Reference has already been made (see pp. 358, 372) to the German Emperor's share in educational reform. He has recently issued another decree, about which the German schoolmen are now buzzing, and which is of enough interest to be given in full.

The Emperor's Edict Concerning the Reform of the Schools.

In regard to the report of Nov. 20 of this year (1900), I announce my agreement to the plan of carrying further the reform of the higher schools that I introduced in the year 1892. The further measures concern the following points:

1. In regard to privileges, the starting point is this, that the Gymnasium, Realgymnasium and Higher Realschool are to be regarded as equal for the general culture of the intellect. No reorganization of the system of privileges is demanded except such as are due to the fact that a special preparation is necessary for many studies and callings in life, in consequence of which fact attention should be given to an extension of the privileges in the realistic schools. This is also the best way to increase the dignity of these institutions and the attendance upon them, and so of accomplishing the wider dissemination of realistic knowledge.

2. Through a fundamental recognition of the equivalent value of the three institutions of higher learning the possibility is offered of emphasizing more strongly the individuality of each. With this consideration in mind I shall have no objections if Latin is decidedly strengthened in the programmes of the Gymnasia and Realgymnasia. I consider it especially important, however, that, in view of the great

[1] See Reform in the German Higher Schools, Oscar Thiergen, Sc. Rev., Vol. VIII, No. 4.

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importance which a knowledge of English has now assumed, this language should be more thoroughly attended to in the gymnasia. To this end instruction in English should everywhere be permitted as a substitute for Greek as far as Untersecunda; and further, where local conditions are favorable, in the three upper classes of the gymnasium English should be made optional in place of French, though the latter should be retained. It also seems to me advisable that in the programme of the higher realschools, which, according to the number of hours still has room for it, geography should have more careful attention.

3. In the management of education unmistakable progress has been made in various fields since 1892. But still more must be done. The directors, having in mind the maxim *Multum non multa*, must take greater care that equally high demands in regard to work are not made in all subjects of instruction, but that the more important of these from the point of view of the different institutions, are brought into the foreground and strengthened.

Especial weight should be laid in the instruction in Greek upon the disregard of useless formalities and especial attention given to the æsthetic side and to the relations between the ancient world and modern culture.

In modern languages particular stress is to be laid upon skill in speaking and clear understanding of contemporary authors.

In the history teaching two gaps are still noticeable: neglect of the more important portions of ancient history, and a too superficial treatment of the German history of the 19th century with all its stimulating, inspiring memories and great achievements for the Fatherland.

So far as geography is concerned it is still to be desired that both in the gymnasia and the realgymnasia the instruction should be placed in the charge of special teachers.

In the instruction in natural science observation and experimentation should have a larger place, and more frequent excursions should enliven the study.

In physics and chemistry the applied and the technical sides should not be neglected.

Concerning drawing—and the ability to sketch rapidly what has been seen deserves consideration in this connection—the gymnasia should see to it that those scholars especially who think of devoting themselves to technical studies, the natural sciences, mathematics or medicine, make diligent use of the elective instruction in this branch.

Besides physical exercise, which should be conducted more thoroughly, the arrangement of the daily programme must give more consideration to health, especially through the right placing and considerable increase of the far too short recesses.

4. Since the final examination has not realized the high expectations with which it was introduced, and, in fact, has rather increased than diminished the excessive tendency to university study, this examination should be abolished as soon as possible.

5. The establishment of institutions according to the programme of those in Altona and Frankfort has justified itself, up to this time, for the places where they exist. By reason of the common substructure which covers the ground of the realschool, they also present a social advantage that is not to be underestimated. It is my wish, therefore, not only that the experiment be continued in a suitable way, but also that it be tried in a broader way where the conditions are favorable.

I cherish the hope that the measures that shall be hereafter adopted, and for the execution of which I rely upon the unchanging fidelity and intelligent devotion of the teachers, will be a blessing to our higher

schools, and will contribute their share toward modifying the antagonism between the representatives of the humanistic and of the realistic tendencies and to introduce a reconciliatory adjustment.

Given at Kiel, Nov. 26, 1900, on board the imperial yacht Kaiser Wilhelm II.

WILHELM R.[1]

To the Minister, etc.

The question of differentiation that we have been considering never could arise when men were united, as in the middle ages, upon one type of education as the only desirable type. It is therefore entirely a modern question. Into the relative claims of the several kinds of education we have not yet entered, and shall enter only briefly. The old classical type is still dominant in Germany, France, England, and shall we say in the United States? At least Dr. Harris shows that the study of Latin has made enormous gains in the United States in recent years, gains greater in proportion than any other study.

But it is in Germany that the battle wages with greatest fierceness, that huge books are written on the matter in that hearty controversial style which it seems only a German nowadays can get warm enough to use in a purely academic discussion. This is finely illustrated in Schmeding's *Die Klassische Bildung in der Gegenwart*, a book that is really interesting as a collection of facts and an example of special pleading. The author, who is a "real" school teacher, has no difficulty in proving that Germany is in a bad way, all owing to the spirit of classical culture whose corrupting influence blasts every form of national life and enterprise. He gives some interesting quotations: "The lack of enthusiasm for science is universal" (Wiese), "Where does one find enthusiasm that grows with the greatness of the task?" (Hoffmann), "The ideal ends fade more and more; a dull utilitarianism gets the upper hand. Men work only for external advantages, for the sake of the examination and of bread" (Risch), "I hold the learned to be altogether disqualified for participation in practical affairs" (Baron von Stein), "What I want to do above all is to shut up the professors in my country. I will save Prussia from the professors" (Bismarck, 1894), "The finished scholar, who is on confidential terms with the history of a past that is 2,000 years old, must have his sight completely darkened for the sun of the present" (Bismarck, 1882). Another rather more scholarly work is Nerrlich *Das Dogma vom Klassischen Altertum*. Here the author gives an interesting historical account of the classical element in formal culture, but his work is essentially a polemic for the time as much as Schmeding's.

[1] Translated from Das Humanistische Gymnasium, 1901, p. 88.

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The Articulation of the Secondary with the Higher Schools.

Some competent body must determine whether pupils are ready to enter upon higher education, whether it be in college or university. Here arises the broad general question as to whether this determination shall be made by the school that the student is leaving or by some authority outside of this school. If the latter view is adopted, it makes little difference whether the outside authority be the school that the student is entering or a board of examiners. Germany solves the question by making the certificate of the completion of the secondary school the full credential for admission to higher study. The student passes his examination in the Gymnasium, Realgymnasium, or Realschule, receives his certificate, and, fortified with that certificate, may enter any school in the state of the class for which his training has been fitting him. Such things as entrance examinations to universities and technical schools are unknown. In France the examinations for the baccalauréat which mark the completion of the secondary school system are conducted by Boards of Examiners who are state officials, but are not representatives of the institution which the student aims to enter. In England everything is made dependent upon the passing of entrance examinations which are set by the authorities at the several institutions. In these three countries, however, secondary education has never been conceived of as being the privilege of the masses, but as a special training reserved for the select few. Such differentiation as may be needed in these few is provided for either at the beginning or at some period during the secondary school course.

In earlier times in the United States the English model was copied fully. At the present time only a few institutions preserve completely the system of entrance examinations, but these few are among the most influential. The West, in large measure through the influence of the University of Michigan, has developed a system based upon the German plan, but which has many unique features of its own. It is interesting to note that the "University of Michigan" was the name given by the charter of 1817 to the whole system of public or state instruction as the same should be organized in the territory of Michigan, the model of the proposed university having been apparently the University of France. A second charter passed in 1821 repealed the earlier one, but still retained the French idea. The constitution of 1835 based the school system on so-called Prussian ideas, but the charter of 1837, enacted under the state constitution, shows new traces of the French influence. This charter directed the Board of Regents to es-

tablish branches of the university in different parts of the state, but these branches should not confer degrees. Several such branches were established and became important feeders to the university. Moreover, they hastened the establishment of the public high schools which took their place. When these branches had been cut away no vital relation remained between the university and the other schools of the state any more than in any other state. But in 1869 and 1870 Dr. Frieze, then acting president, made a practical suggestion embodying a fruitful way of carrying out the Prussian ideas and raising the high schools of the state to the rank of realgymnasia. In his report for the year Dr. Frieze states that his plan had been carried out and the results that he expected to follow are outlined as follows:

"The effect of this plan of annual examination, which, of course, is to be matured and perfected by experience, will be to stimulate the schools to a higher grade, and bring them to a more perfect uniformity of preparation, and thus make it possible to elevate the scholarship in the lower classes in the university. But more than this, it creates at once a reciprocal interest between the schools and the university, and also wins for the university a livelier interest on the part of the citizens whose schools are brought into such close connection with the institution. . . . . The principle of this movement is obvious. We go back to the schools and aid their instructors in devising correct plans and laying solid foundations of scholarship, instead of waiting until pupils present themselves at the university prepared under dissimilar and perhaps erroneous systems, often imperfectly prepared, and sometimes rejected for deficiencies which could have been obviated by this previous interchange of views between the faculty and the preparatory teachers."

What the university really does now is to send a commission to examine schools and approve such as are deemed worthy for periods of from one to three years. When a school is accredited, the student who comes to the university properly certificated is admitted at once. Dr. Hinsdale states the results as follows:[1]

Schools have been stimulated to a higher grade of work, preparation for the university been made more uniform, scholarship in the lower classes elevated, closer reciprocal interest between schools and the university been created and a livelier interest in the university awakened in the public mind. The schools receive from the university the most practical and useful report on their work that it is possible for them to receive. The Board of Education find great interest in visitations and find them very helpful. The faculty renews its acquaintance with the schools in the most practical and direct of ways so that the faculty discussions and decisions on many subjects are guided in no small degree by the observations of the professors in the schools. Much of the information needed on both sides can be acquired in other ways, but in no other ways can it be made so real, practical and useful as in this way. The system, it may be said, is

[1] B. A. Hinsdale: The Michigan System (in Proceedings of the North Central Association of Colleges and Preparatory Schools for 1896).

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extended far beyond the state and to private schools and academies as well as high schools. The standards of many of these schools have been raised, their methods of teaching improved, their apparatus and libraries augmented and their tone elevated by being brought into diplomal relations. The most serious weakness of the system is the tendency to undue expansion, and the amount of examining to be done tends to outgrow the ability of the faculty to do the work as it should be done.

Admission to college by examinations set by the college itself is too well understood to require explanation. The chief arguments advanced by the adherents of this system are the following:[1]

Entrance examinations furnish in themselves most valuable educational discipline. Entrance examinations as conducted by the leading institutions of the country are an adequate and satisfactory means of determining the qualifications of candidates, and, under existing circumstances, are the safest and most satisfactory means we possess. Conditions of secondary education are most varied, and colleges drawing from large areas have no uniform standard of excellence in preparatory schools to depend upon. By entrance examinations one standard is applied to all candidates for admission, and it is fairly certain that all successful candidates have met a fixed minimum requirement. The standards for admission to college are largely maintained by entrance examinations. The varying standards of admission requirements are measured chiefly by the requirements of the older institutions in the East which have steadily maintained entrance examinations, and by means of entrance examinations have raised the standard of admission to college for the entire country. The institutions that admit by certificate have neither set, nor do they at present maintain a standard for the country at large. Many of the best secondary teachers feel that far more credit comes to them and to their schools from their students' success in meeting a uniform test of examinations than comes from permission to send pupils to college without examinations. The success of pupils on entrance examinations is the current stamp of approval on the teacher's work that the teachers value highly.

Such in brief are the arguments in favor of the examination. Under present conditions it is impossible for any college or university to inspect all the schools that send pupils to it, and, therefore, those which have the diploma system still retain the examination system for those students who come from other than accredited schools.

A very important modification of the entrance examination

[1] Clifford H. Moore: The Examination System, in Proceedings of the North Central Association of Colleges and Preparatory Schools, 1896; also printed in the School Review, Vol. IV.

system is shown in the methods of the College Entrance Examination Board established by the Association of Colleges and Preparatory Schools of the Middle States and Maryland. This board conducts, at numerous convenient centers on the same date, examinations in all subjects that are accepted for admission to college. These examinations are recognized by a large number of colleges and universities, and the student who passes them successfully finds many doors open to him. The papers are made out and read by examiners and readers selected from the teaching force of the institutions belonging to the association. Uniform admission requirements are thus maintained for all institutions that accept the work of the board. The first examinations under the system were held in June, 1901. This board must at present be regarded as one of the most significant factors in working out the great problem of the mutual relations of the secondary and the higher schools.[1]

The University of the State of New York is a unique educational organization worthy of careful study since its history and development illustrate some of the most notable features in all educational development.[2] In January, 1784, two months after the British left New York, Governor George Clinton sent his message to the legislature in which is found the first public expression of the need of better educational institutions. His words are these: "Neglect of the education of youth is among the evils consequent on war. Perhaps there is scarce anything more worthy your attention than the revival and encouragement of seminaries of learning." A movement was at once started, and James Duane presented a bill entitled, "An Act for establishing a University within this State." The friends of King's College, which had been suspended during the Revolution, captured the movement started to establish a university, and the title was amended to read "An Act for granting certain privileges to the college heretofore called King's College for the name and charter thereof, and erecting an University within this State." Thus the influence of the old university was to be dominant in the new régime, and laws passed May 1st, 1784, made a body of men who were virtually trustees of Columbia College autocrats in the whole educational system of the state. This was also the law which changed the name of King's College to Columbia. Columbia captured the Board of Regents, and for three years controlled their actions.

[1] For the history of this movement see Proceedings of the Association of Colleges and Preparatory Schools of the Middle States and Maryland, 1898, 1899, 1900.

[2] See for full account, Sidney Sherwood, Regents Bulletin, No. 11, Jan., 1893, on the University of the State of New York, Origin, History and Present Organization.

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Opposition soon developed to this preponderating influence of Columbia. One of the lines of opposition was directed to the preponderance of a distinctively church college in state educational affairs. In 1787 a new law was passed which remains substantially the basis of the regent system.

The effects of the law, without going into detail, were that it lessened theoretically the rigor of state control of the system by emancipating the colleges from the actual government of the regents while it practically widened the scope of this state control by emancipating the regents from the monopolizing control of Columbia. An interesting detail of this act is found in the provision in regard to incorporated academies, limiting their income to the value of four thousand bushels of wheat. The whole educational work, including the common schools of the state, was placed in the hands of the university. It is to be noted also that the Board of Regents of the State of New York did not resemble the regents of the English universities, and that the whole idea of the University of the State of New York was essentially a pattern to the University of France. This New York organization has undoubtedly been the model for many western states, so that we see a great line of apparent French influence upon our own educational system.

It may be said that Napoleon did not constitute the University of France until nearly twenty years after the organization of the University of the State of New York, but plans for the reorganization of education had been rife in France since the days of the Encyclopedists. Ever since 1762, indeed, France had been flooded with writings upon this subject. At the time of the Revolution, as we have seen, Talleyrand, Condorcet, Mirabeau and others presented reports and plans upon the subject of national education. All French ideas passed readily to the New World. There was, no doubt, reciprocal influence from the New World upon the Old. "France may claim to have given New York the symmetrical state system of secular learning. New York may claim to have given France the practical form of such a system in its great, all-inclusive university corporation." So far as the form is concerned, then, the University of France is indebted to the University of the State of New York. This body has now a dominating influence upon secondary education in the State of New York. Supervision of the common schools passed into the hands of the State Superintendent of Public Instruction many years ago.

The Regents of the University of the State of New York now have a large and competent staff devoting their time entirely to the inspection of schools and the conducting of examinations. These inspectors visit all the high schools and academies of the state regularly, and upon their report and upon the

results of the examinations held depends the state allotment of money. The regents' examinations are held in all the high schools and academies of the state, the questions being uniform, prepared by the department, but the examinations are conducted by the teachers. The papers, after being read by the teachers, are sent to Albany for rereading and regrading. The total number of papers read is enormous. An academic syllabus is regularly issued, the purpose of which is stated as follows:

"This detailed syllabus was prepared to indicate definitely the scope and character of the examinations in the several subjects. It is hoped that in this way the diversity in preparation which arises from the use of different text-books, and from different methods of instruction, may be obviated. It is not designed to interfere with that freedom and flexibility which ought to exist in a system of instruction so extended as that conducted in the academies of the state, but only to specify with such exactness as may be practicable the subjects and the extent in these subjects for which the candidates in these examinations will be held responsible. It is understood that the restrictions laid down in the syllabus are intended as well for those who prepare and issue the questions as for those who are to be called upon to answer them."

The credentials issued by the regents are accepted for admission to the colleges and universities in New York State and also by many institutions outside the state. This system of examination is most extensive, thorough and systematic, and, doubtless, has no superior in the world.

The syllabus upon which the examinations are based is revised every five years. This revision takes place after the widest opportunities are given for consultation and suggestion on the part of the secondary teachers of the state. The syllabus, as finally adopted and published, stands for five years. Thus frequent and irrational changes are avoided. The schools know for five years, at least, exactly the work they will be called upon to do. This is one of the most important features of the system, one which all colleges might well copy in their arrangements of entrance requirements.[1]

The historical development of the relation of colleges and universities to secondary schools is such that at the outset the higher institutions not only could mould the curriculum of the lower institutions, but were expected so to do. The secondary

[1]The subject of articulation between secondary and higher schools embraces more than what may be called mere mechanical means of passing from one system to the other. The reports of various institutions of higher learning contain most valuable information upon this subject. The reports of President Eliot, of Harvard College, have for several years been notable in this respect; one of particular value appeared in 1898. The whole subject is treated most interestingly and thoroughly, also, in the report of Dean Capps, published in the President's Report of the University of Chicago for the year ending July 1st, 1898.

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schools in the early days of this country were grammar schools and academies established in the main for the sole purpose of fitting pupils for college. Colleges were located in different sections of the country, each, to a large extent, with its own peculiar constituency upon which it was able to stamp its seal from the beginning of the preparatory course. There was entire lack of any central authority in higher education, and, for the most part, of state supervision of any kind. That great disparity in college courses should grow up and be perpetuated was inevitable from the circumstances of the case. So long as different sections of the country remained isolated and college fitting schools were called upon almost exclusively each to fit for its own special college or university, little difficulty arose; but as railroads multiplied, transportation became cheaper and travelling developed into a national habit, various causes arose to make this lack of uniformity a serious evil. Population was no longer fairly fixed but roving. This roving feature of our population is a unique characteristic of the United States. In the same city there will congregate graduates of twenty or fifty different colleges, each of whom will desire to send his children to his own *alma mater;* but all these children, or a large number of them, must be fitted for college in the local high school. Added to this element of complexity there is frequently a feeling that it is good for western boys to be educated in the East, and, much less frequently, that it is well for eastern boys to be educated in the West.

With college entrance requirements fixed and immovable and varying enormously, it became a task of almost superhuman difficulty for the high schools to meet these requirements. The private secondary schools have largely for this reason taken a position of increasing importance in fitting for college; but that college preparation should be entirely relegated to private enterprise would certainly mean to deprive the high schools of one of the greatest incentives to scholarly work by which they are now affected. Any one who is interested in seeing how great the diversity of requirements was may examine the tabular statement of entrance requirements to colleges and universities of the United States which appeared in the School Review for June, 1896, and also a statement published in the Report of the United States Commissioner of Education, Volume I, 1896-97.

Two notable efforts have been made to bring some uniformity out of this confusion. The first is that which resulted in the Report of the Committee of Ten on Secondary School Studies, a document now familiar to every one engaged in the field of secondary education. This report presented certain model secondary school curriculums which had been prepared by an

eminent body of experts. While the special reports upon which the model curriculums were based have been found of great value, the curriculums themselves have not found universal acceptance, though undoubtedly much good influence has been exerted by them upon the schools.

With the primary purpose of securing the wider adoption of the work of the Committee of Ten in the schools, a committee was appointed by the departments of secondary and higher education at Denver in 1895, which after four years of work presented its conclusions at the meeting of the National Educational Association at Los Angeles in 1899. This committee adopted a different plan from that followed by the Committee of Ten. In the first place, no model curriculum is presented. The fundamental problem for this committee is the formulation of courses of study in each of the several subjects of the curriculum which shall be substantially equal in value, the measure of value being both the quantity and quality of work done. These courses of study are to constitute so many national norms or units, which shall be of equal value everywhere, and a certain number of which, varying with different institutions, shall constitute the requirement for admission to the higher schools. Emphasis is laid upon these units rather than upon the combinations that may be made of them.

In the terminology adopted by the committee the programme of studies includes all of the work offered by the school, and is made up of a certain number of courses of study in the individual subjects, a course of study being a unit. From the courses of study, a curriculum or several curriculums may be made up for different classes of pupils, or for the individual pupil, a minimum fixed requirement being suggested in the way of a small amount of English and mathematics. No uniformity in programme of studies or in curriculums is aimed at by the committee, these being left for adjustment according to local conditions. The assumption is made throughout the report that a certain amount of work rather than a definite prescribed kind of work shall be the qualification for admission to college, and that all courses of study of the quality outlined by the committee shall be regarded as good collateral for college entrance. The principles of election in secondary school work and of wide option in college entrance requirements are thus fundamental. Upon this basis it seems likely that some degree of uniformity may be introduced into our secondary education and into college entrance requirements. Whatever is accomplished must be by means of mutual agreement and constant agitation, since in this country we possess no official means of enforcing any views upon this question.

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Final Considerations.

Whoever has had the courage to read thus far has doubtless found more questions raised than answered. Baumeister's great work devotes some nine hundred pages to a description merely of the organization of the school systems of the various states. To Germany alone is given the equivalent of some two hundred and fifty pages the size of this. The accounts in Baumeister, however, are written by natives of each country that is considered, and are, for the most part, purely descriptive, nor are they always easily intelligible to the foreigner. Of comparison between the different systems there is scarcely a trace. Neglecting from necessity a multitude of interesting and important details, I have endeavored to present the chief features of the leading systems side by side, to the end that both fundamental similarities and fundamental differences might clearly appear. Certain basal questions eliminate themselves from the tangle of likenesses and unlikenesses and present themselves as problems whose solution is pressing not in one country but in many.

The problem of problems is that of the social function of the school. Is it to aid in the separation of society into classes or to become the great social unifier? The answer to this question depends entirely upon the organization and conduct of the schools themselves. When Napoleon organized the lycées so that they were objectionable to the better classes, the lycées were promptly deserted by the better classes. In England even to-day the free public schools are to all intents and purposes poor schools. To preserve class distinctions no better way has as yet been invented than a system of free public schools so administered that only those parents who are too indifferent to care or too needy to help themselves will send their children to those schools.

A part of this same problem is seen in the struggle now going on in all the countries we have considered to bring the schools closer to the needs of every day life. Especially is this true in the domain of secondary education. What other meaning, for example, has the struggle over differentiation in the secondary schools? The primacy of the ancient and honorable classical course has not yet been seriously shaken in France, or Germany, or England, or the United States, but other courses have been widely introduced and are increasingly popular. But are the new courses to lead to equal privileges with the old, and so to attract attendance from all classes of the community, rich as well as poor, professional, commercial and artisan? If all the courses are placed under the same roof, will the newer ones have a fair

chance? They did not have in France. If they are separated in different buildings will the preponderance of social desirability be in proportion to the preponderance of the older disciplines? That has been the case, certainly, in Germany.

Here and there we catch glimpses of a new factor to be reckoned with in school organization, nothing more nor less than the individuality of the child. The older schools considered this a negligible factor, if indeed they considered it at all. To catch the child young and make of him an adult of this or that pattern, chiefly according to the social ambition and financial resources of the parent has been the task of the German higher schools. Sometimes they failed, but then was it not always because of the inherent stupidity of the child? That was the obvious explanation. But the fact that the child has a personality, an individuality of its own is pressing for recognition. All men may be born equal, but all children are not. This new factor is not only a contributory cause to all the discussions about differentiation of courses, but it also enters into many of the pressing school problems in ways unknown a generation ago.

If it were not for the spasmodic habit of educational movement it would be safe to prophesy that the dominant considerations in school organization for the next generation or so would be social adaptation and individual conservation. But while it is possible in school matters to point out the tendencies that prevail at any given minute it is quite fruitless to speculate how far any movement will carry. Apparently the only thing certain is uncertainty. Scarcely any other great human interest has been so hysterical in its conduct as education. "Fads in education" is a common form of speech, only too well justified by the facts. The history of education shows every extreme of theory and practice, every form of control, state, church, family, community, successive or simultaneous. The partisan spirit in education is always more or less rampant. The supply of controversial questions never runs out.

Let it not be thought, however, that the schools are the football of chance. On the one hand they have to-day their full share of the best administrative talent of the world,—on the other, in this country and in many others, they are grounded firm on the rock foundations of the peoples life. The amount of grumbling about the school tax is surprisingly little. The typical citizen is not the one who growls about the schools but the one for whom no sacrifice is too great to give his children a better education than he had.

In all fields of public administration the great modern city is a perplexing factor. Already the city enjoys as a rule a large measure of freedom from state interference in educational as in

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other matters. Owing to the concentration of wealth and population the school conditions in the city are not the same as those in the rural community. Each section has its own advantages and disadvantages. By combination, free transportation of pupils, and other methods the country is making progress towards securing urban school advantages. But the progress is slow. So far the city has made even slower progress in removing the evils of overcrowding and unfavorable environment. All conceivable evils in school administration are bound to develop, and to develop in an aggravated form in the city. They are equally bound to be combated with vigor. The city is then the great pedagogical laboratory.[1]

Any great machine loses efficiency from friction. A great school organization constantly confronts these deadly perils, that too much energy will be wasted in merely keeping up the motion, that the greatness and complication of the machinery will beget a helpless and hopeless wonder soon to merge in worship, that the individual child, whose interests are the sole excuse for the organization's existence, will become too insignificant to be considered. Unwieldiness, idolatry and uselessness are, then, the three perils that school organization must somehow or other escape. These are the greatest, but by no means all. Already it is clearly recognized that in the public schools exists ready to the hand such a tool for propaganda that the temptation to use it unwisely has not always been resistible. Nor will it be denied that the political possibilities of the schools have, in the United States at least, had ample recognition.

The political question starts a train of considerations. In the United States the notion has apparently prevailed that the schools, supported by taxation, should be divorced entirely from politics. We have no cabinet minister for education. The state superintendent is, it is true, frequently elected by popular vote on a partisan ticket, but it is not expected that he will administer his position on political lines, nor could he exercise much political influence if he tried to do so. In cities the general theory is to place the administration of the schools in the hands of a non-partisan board of reputable citizens. Ostensibly, then, our schools are "out of politics." In reality they are very much in politics, and certain to remain there.

Might it not be better to be honest in this matter? In those countries we have been considering where the minister of education is a responsible member of the administration, losing his

[1] A very interesting and suggestive contribution to the problem of city school administration is the Report of the Chicago School Commission, 1898.

portfolio when the country votes against the cabinet of which he forms a part, there is scarcely a trace of the unworthy sort of political influence in the schools. The only subject in which the American people can apparently be counted on to sustain a lively interest is politics. On all political questions is shed the constant glare of publicity. To take any great public interest out of politics is likely to put it under conditions where strange things can be done in dark corners. The cloak of non-political respectability may hide a multitude of sins that would not bear the light.

Perhaps, then, we need not less politics, but more politics in our school affairs. Granted that American political life is imperfect, we shall not improve it by calling it by another name. We shall not improve any great public interest that possesses inherent and inevitable political possibilities by saying it does not. We shall not overcome the present normal apathy of the American citizen on school questions by removing these questions yet further outside the circle of his certain active interest.

In England, Germany and France the schools are masculine; in the United States they are feminine. The condition in the United States to-day is this: women form an overwhelming majority of the teachers, girls form an overwhelming majority of the pupils, and mothers manifest an overwhelming majority of the total amount of real interest taken in the schools. That feminine influence will always be strong in our schools is as certain as it is desirable. But if, as is sometimes held, men are really good for something in stamping the imprint of civilized attainment on the generation that must be its conservator, then it would seem a pity that they should be not merely permitted but encouraged to keep hands off the schools. Ways and means may need devising for keeping the boys in the schools, masters at the desks, men in sympathetic and helpful relations to school activities, all in reasonable proportion.

All the civilized nations of the world carry into the twentieth century a great school system in good working order. The invention has been made and in a measure perfected. What is the task set the new century? Comenius, Pestalozzi, Froebel, Herbart, their predecessors and disciples, have furnished a tolerably adequate body of pedagogical doctrine. The times do not seem to cry out for another prophet of their stamp. The pathetic need is for wisdom and honesty to manage this mightiest of social organizations, the public school; to manage it in such a way that the whir of the machinery will not drown the cries of a single helpless, tortured child; to manage it so that we may not be awed by its immensity into an idolatrous worship of its very shortcomings; so to manage it that it shall not be a propaganda shop for "fads" or "isms" or "ologies"

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or pseudo-science; so to manage it that it shall draw ever nearer the hearts and lives of the people; so to direct it that it may always be aware of its ideals, alert to its opportunities the servant of an ever higher civilization. This is a task worthy of the giants that shall appear.

LATIN IN SECONDARY SCHOOLS.

By Rufus C. Bentley.

It is fair to state at the outset that my thesis in regard to the study of Latin in secondary schools is not that such study should be increased, nor yet that it should be slighted because such study is not desirable, but, for reasons which it is my purpose to bring forward, that its use as a secondary subject should be among the last rather than the first language subjects afforded by the ordinary school. If it were my main purpose to discuss the relative merits of language subjects as material for secondary instruction, I could, consistently with the ground I shall take, support the thesis that the vernacular ought to take precedence over every other language, that the field should be broadened in the modern languages, and that the study of Latin and Greek are justified in secondary instruction only when the school can afford luxuries.

I mean to imply that there is a valid case in court against Latin, at least so far as the nature of the claims made for it go; that those claims are much too ambitious and made upon false premises (arguments lodged against Latin are pretty sure to attack Greek upon the same ground); and that, in a word, the advocates of the wide use of Latin in secondary schools seem inclined to defend the last ditch on the ground of the *formal training* value of the subject. The skirmishes of this defence are seen scattered thickly through the periodical educational literature back to the days of the Committee of Ten, many numbers being largely devoted to symposia or debate upon the subject.

Three phases of the subject must be noticed: (1) the historical facts of secondary instruction in Latin, (2) the present status of the teaching of Latin in the public high schools is to be compared with the actual needs of modern American communities, and (3) the arguments for Latin as now presented are to be weighed.

Following—or in fact published with—the Report of the Committee of Ten came President Baker's minority report which pointed out the fallacy of the vain assumptions of the several committees, viz.: that subjects of study were mere instruments of education, and that the work of education began by a mere choice of almost equally efficient tools. Then there

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was the remonstrance made by President Schurman against the same thing; and, as if to point the subject with all its glaring and bristling defiances of the laws of an accepted psychology, Professor Hinsdale published "The Dogma of Formal Discipline." In this paper the author set forth clearly the limitations which psychology sets to the dogma so confidently used by the committee. An analysis of the extravagant claims made by each several sub-committee leaves them devoid of psychological support. But the value of the paper as suggestion for investigation is even greater than its theoretical value. Arguments *pro* and *con* may make appeal where minds are open, and even some headway against prejudice; but the field is fallow for the more fruitful cultivation which experiment can give it.

In the face of the rebuke which these protests have made against the anachronism of the Committee of Ten, a work recently published, *The Teaching of Latin and Greek*, by Professors Bennett and Bristol, of Cornell University, has taken a stand upon "the dogma" as if nothing had ever happened to its underpinning. The bold appearance of Professor Bennett's opening chapter on *The Justification of Latin*, gathering up into itself all the most ultra arguments of the formal training literature, so fully represents that whole line of argument for the study of Latin that a review of it in some detail will serve the purposes of my main point.

No one contends that Latin was deliberately introduced into the schools of modern times; but remaining as it has from a time when it was, though not the vernacular, still the medium of all literary expression, it has had to present its own justification for remaining into the time when schools and society are inclined to test everything, to hold fast only that which is good. The philosophy of the history of education makes no fact connected therewith more clear than that each age has consciously or unconsciously expressed its hopes and its needs in its education; through all the mistakes of its theorists always finding, nevertheless, some part of the truth and doing little violence to the rest, except perhaps as the theorists themselves over-expressed the truth in their over-enthusiasm. In accordance with this principle our own time will eventually find its way out to clearer light upon some of the vexed questions of "educational values." Indeed it is the sheer demand for the credentials of each subject of study, whether already in the curriculum or seeking entrance, that has driven them, not only to sharp competition for places, but even to extravagant representations of peculiar merits.

It is perhaps not an unfair explanation of the extreme ground taken by the apologists and advocates of classical studies, to

contend that their ultimate reliance upon the validity of the dogma of formal training is itself an indication of the straits of the case. The anachronism of the Report of the Committee of Ten appears in almost every separate report, where the 'faculties' are virtually parceled out to the various subjects, each faculty labeled with its needs and the subject which is, as it were, its specific. There is a strange significance in the appearance of this report just at the moment when psychology gave the cue for an outspoken repudiation of the whole doctrine of formal discipline. If the ground of that repudiation is well taken a heavy burden of proof is thrown back upon the advocates of any subject, a burden heavy in proportion as the subject has confidently thrown aside all other credentials. The case against Latin must at least stay in court till the charges which have been brought by a reputable psychology are either proved or withdrawn.

In mediæval schools the study of Latin groped its way through a period of mechanical use, which was flagrant enough to be no stumbling block to any one in modern times. The difficulty which really stands in the way of an unbiased judgment of its present worth enters with the later humanistic movement, through which Latin came to its own, and, in theory at least, presided at the feast which was to serve up to humanity the best of human history, all of which then lay in antiquity. If Latin—as a subject of study for the ordinary student—could fulfill this promise, and as a language *usable* by the student put him into communication with that life of the ancient society of Rome, and of Greece behind her, there would still be a chance to take the case out of court without relying upon the sanction of a hopeless dogma.

The history of Christianity is a record of the successive exaltations of mediators. The history of language study is a worthy analogue. The next step after recognition of what the language could unfold was the canonization of Saint Cicero; and the modern humanist has not yet ceased to bask in the light of his halo. We are said to be still living in the days of the best humanism. "The number of students in Latin in our secondary schools has in recent years been increasing out of all proportion to the number of students who go to college. Unless this phenomenon be attributed to an unaccountable infatuation it admits to my mind," says Professor Bennett, "of but a single interpretation. Latin is now recognized as an important element of secondary education for the average pupil whether he be intending to go to college or not. Yet," he continues, "it is perhaps unfortunate that the present tendency towards a larger study of Latin in our schools cannot be traced to any recent sober discussions of the value of Latin; in fact it

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is not a little surprising that this rapidly increased recognition has occurred in the face of the most vigorous assaults upon the classics which this country has ever experienced. Is it too bold to say that the experience of those who have studied Latin and of those who have seen the positive results of the study upon others, is after all the ultimate reason which is at present so potent in winning increased recognition of Latin?"

For the purposes of our argument we could have made no better statement of the case, although it would have been too harsh a comment upon the articles which have been written, and which doubtless have been influential in increasing the study of Latin, to have dismissed them as not 'serious.' From the best point of view they are perhaps not the most serious because they are all expressions of opinion, and produce no more convincing proof than ought mere opinion backed only by the writer's 'experience.' When we shall have had instead of opinion, *evidence*, and instead of experience, *experiment*, it will be time to give arguments upon the subject of teaching Latin in the public high school *serious* consideration. That the phenomenon is not to be attributed to an 'infatuation' (at least of spontaneous origin), nor to a deliberate consideration of the prime importance of Latin, nor even to a recognition of it "as an important element of secondary education" by the great majority of those who have been induced to expand its study or adopt it; but that this great increase in the secondary study of Latin is due directly to the zealous efforts of a few able partisans of the subject must, upon careful thought, be evident to any one who will give it that thought.

The public high school, not the whole secondary field, and that public high school modified by the character of the community in which it is located, is the proper field for the consideration of Latin teaching. For, on the one hand the public high school is the only one about which any generalizations may be made with reference to aims, since it is the individual prerogative of each private school to state for itself what its purposes shall be; while on the other hand the public high school is, in the first place, probably the known quantity which the theorist in secondary education has in mind in his discussions, and is, in the second place, peculiar above other public schools, especially in this, that its aim may be greatly modified to types which will suit the actual conditions and needs of the community where it is located. At least such will be the contention of this paper in defining the aims of the high school as related to the subject of Latin; maintaining that it is first of all the duty of the school to adapt itself without prejudice to the actual needs of the community. It is true that in recent years high schools have taken a wide divergence in types, as seen in city

manual training schools, but it needs only a second thought to see that the establishment of different sorts of high schools in the same city is an abortive attempt at the best, if it be an attempt at all, to adapt the school to the actual needs of the community. While the problems of large city high schools are peculiar to themselves, and not particularly in mind in this discussion, we need but to notice this differentiation into separate classical and technical schools to see that it is, whether consciously or unconsciously, an effort to adapt to different classes of society rather than to different communities. When this question shall have been reduced to terms in which we shall be able to express our own peculiar national conditions without resorting to an entirely foreign terminology like that of Prussia we shall have much help in handling the subject of high schools in large cities.

For present purposes I am chiefly interested in smaller communities, smaller in individual population, but as communities many times greater in number than the cities. In these smaller towns the high school idea is really only just earning its right to exist, and in these communities there are problems of organization which they will never be able, unaided, to fish out for themselves from the floods of tradition. It will not do to leave it to time to straighten out crooked lines of action. If this is an age of conscious adaptation why not give serious attention to the difficulties which the future will unearth if we let things drift, and relieve the future of the incubus of long standing mistakes? What are the needs of the smaller communities which are nevertheless large enough to graft on the high school to the elementary system? Is it possible to adapt that school to the needs of the community at the beginning? If so what stands in the way of such adaptation? And are we willing to face the issue when the needs are proved?

In commenting upon the sweeping claims made by Professor Bennett, for the use of Latin as an almost indispensable means of discipline, I have in mind, then, not the high schools of cities, not even those of smaller cities, which by sheer force of numbers have advantages in organization and administration over the smaller schools, and are afforded an equipment which makes it possible for them to offer a great variety of subject matter. Throughout the smaller cities and country towns there are hundreds of high schools whose actual conditions, it is safe to say, do not arise into the thought of the theorist when he generalizes upon the needs and possibilities of secondary schools. The gross statistics of such schools certainly demand a much larger recognition for their type. Yet still more than the statistics which would show the *present* membership, the fact that it is small as compared with the school census, and

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that it could, and ought to, be greatly increased by legitimate means, is a fact which, though negative in character, makes a loud call for consideration.

If it were possible really to determine with such assurance as that of Professor Bennett and the Committee of Ten on Latin that Latin (and for that matter any of the subjects of convention), which they find must enter into the minimal curriculum of the secondary schools, were the ones without which secondary instruction would be an empty name, then it would follow at once that the problems of curriculum for small schools would all be solved, and the like problems of larger schools would be simply one of choice as to what electives they should offer. The truth of the matter, if plainly told, is that while a group of men who are teachers of a particular subject are pre-eminently fitted to show *how* that subject should be taught, there is no evidence of their willingness to throw the question open for debate as to whether the subject is as necessary as they have always considered it, much less to enter the debate as an open field and present the arguments on both sides.

Professor Bennett dismisses at the outset the subject of Latin in college, and thus simplifies the problem of criticism as well as his own, except—and the exception is a pivotal matter with the criticism—except that the prevailing notion of the relations existing between the high school and the college makes a difficulty which is an obstacle to innovation while it entrenches the advocate of Latin behind a barricade heaped up out of ages of tradition. Shall the fact that Latin is taught in college have anything to do in deciding the question as to whether Latin ought to be taught in the high school? Whatever may be the power of the professor of Latin or Greek to forget, when he is discussing its use in the high school, that it means everything to the success of his department whether it is taught in secondary schools or not; or whatever may be his power of placing himself in the position of the high school principal, or better yet in the place of the community under discussion, the fact remains that the ideal hitherto set has been that of the ultimate purposes of the college and university, and the ideal comity has been that of absolute dictation from the higher schools. The college professor of Latin or Greek has the same right to demand a part of the work in his subject as preparation for work in that subject that any other college professor has; and that is, in any case, *no right whatever*. This is the real logic of the statement Professor Bennett makes that the value of Latin as a college study is a question entirely distinct from the question as to the value of Latin in the secondary school. That is to say, we cannot properly discuss the value at all, until we forsake the notion upon which relations are now

so largely organized, namely, that what any teacher of a higher school wants to be able to accomplish has anything whatever to do with what the teacher of the lower school shall be expected to teach. Until this change of attitude comes about in the men who want students more than they care what students need, the prospects of the high schools will fare badly at the hands of committees made up of such men.

It is no easy task to keep the craft called "the function of education" well out into mid stream and free from the snags of formal training which lie just beneath the surface of such expressions as "Latin (or mathematics, or history or what not) as an *instrument* of education." Yet it is by using such an expression as the terms of his theme, and by starting upon Laurie's statement that language is the chief instrument of education, that Professor Bennett bases his whole justification of the secondary study of Latin. Less radical replies to this statement would go far toward covering the whole ground, but why not meet the statement with the fact? The fact is that language as language is not an 'instrument' of education. Education is not a process that is effected by the use of instruments—as if it were a surgical operation,— but it is really as different from the operation of instruments as is the process of physical growth from the surgical operation which checks or stops growth. One requires *food*, the other *instruments*. Language is one vehicle of expression and nothing more, be that which is expressed, an idea, a group of ideas, a thought, or a logical concept. I do no violence to Professor Bennett's thought in this refinement, for it is just such a mistaking of the sign for the thing signified that he dwells upon in this connection. "It [language] promotes intellectual discipline and brings intellectual power, because the study of language brings us at every turn face to face, as nothing else does, with subjects and questions of intellectual concern and intellectual interest." If the thing were put in exactly the converse way it would express more truthfully facts of education. "Subjects and questions of intellectual concern and intellectual interest bring us face to face at every turn with language as the means of their expression." There are some places in our educational practice where we need to turn our expressions inside out to get a truthful statement of what we are—or should be—after. Do we breathe because our lungs enjoy the process as an end? or is it because air is the food of the blood and the body while the process of breathing is the means of bringing the blood and its food into contact? Is breathing or life the desired end? Language comprises the instrumental signs of a process, and no process, not to say its mere signs, is an end in itself. The question might well be raised whether language, even the English

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language itself, merely as such, is ever a legitimate object of study before the time comes to study its science in grammar and logic. If this be true of the vernacular where does the classical language stand? The correct use of the mother tongue, whatever conjuring may be done with it, will only be learned by correct use in expression. Those who wish to express or receive through foreign tongues should study those tongues for this same good reason which holds for the vernacular. But here the argument for the study of language breaks down, when the effort is made to apply the same principle to the study of the ancient classical languages. That earlier mediæval reason for the study of Latin was identical with the one just mentioned. And here is the weakest point of all in the argument for a wide study of the Latin language to-day. If it be maintained that our civilization is but an outgrowth of the ancient, not yet fully grown through the rough shell of mediæval barbarism, the contention cannot be gainsaid; but if it be further maintained, as is so often done, that the way to a knowledge of that civilization is through a knowledge of the languages of that time, it may be as confidently re-asserted that their knowledge, for people who really do know much of that civilization in a sympathetic way, did not come largely through direct reading. It is even true of many college professors of the classics that at most they cannot have read more than a few hundred pages of the language itself, nor would they know essentially more of the ancient civilization if they had read all its extant literature in its native form. How many of them spend quiet hours of literary enjoyment in the perusal of uncials unseparated into words, or even in deciphering palimpsests? If this be true of expert scholars of the classic tongues, it were folly to urge it too strongly as the reason why the ordinary layman should ground himself in the classics. Granted that the ancient civilization lives in its literature, pure and not altered as we see it in the history of intervening time, it cannot be proved that any considerable part of it contributes directly to modern civilization because there are many people who can labor through a few pages of Cæsar, Cicero and Vergil. The language, with all there is left in it, we shall always have, and have as abundantly as now, if no public school should teach another line of Latin.

This gone, there is practically no argument left but the training value of the subject; and this is the ground upon which Professor Bennett makes his whole plea for the teaching of Latin in the secondary school, insisting first of all upon the power of translation to react beneficially upon the use of the mother tongue: "The mastery over the resources of one's mother tongue . . . . comes as a direct and necessary

result of careful daily translation. . . . . " Strange and perverse as must seem the contention to those who hold this belief—for it is only a belief, and remains to be supported by evidence—I must contend that for very many pupils the mere process of the translation of Latin is as foreign to the production of good and adequate English as any exercise in language could possibly be. No one will deny the necessity for a careful analysis and comparison of forms of expression in the process, but I maintain that as an exercise in attaining good expression in English it is at best a roundabout and ineffective process; because, while the fundamental qualities of thought process are universal, there is to each language a genius of idiom which, taken altogether, makes up its completed frame of thought. In translation, which is done sentence by sentence, the effort is made to think in two languages at once. As an achievement in English the immediate translation will be poor, while the mind is upon the Latin expression. The value of the exercise is strictly not in the translation at all. Let the pupil read the Latin and think the sentence in Latin, unhampered by an effort to put it into English, and he is undergoing a profitable process in language, but let him try to express it in English while he is reading it in Latin, and the English thus produced by the pupil of ordinary power is such an execrable haggling of his native speech as even that pupil would be incapable of under any other circumstances. What else do the urgent warnings against "translation English" imply than that translation, as translation, has a bad effect upon the native speech of the ordinary pupil? But let him now perfect the English expression and you have had the performance of two exercises in language, which are distinct, but neither of which is really translation, and neither of which is really expression. The translation, as such, may be a good lesson in logic, but it is not a lesson in expression, and the mother tongue has been subjected to a test which has by no means contributed to its spontaneity; not to mention the torture it has suffered to make it express the Latin writer's thought in passages which answer sentence to sentence, even phrase to phrase, doing violence to the unhampered freedom of each language, worst of all to the language one is supposed to be improving. This problem is very different from that of translating French. In the case of translating Latin into English, the translation is from a language of synthesis to one of analysis, from one in which arrangement of words depends directly upon the emphasis intended, to one in which the arrangement of words in clauses is practically limited to a fixed order, although both admit of periodic structure. And this inherent difference in structure is not likely to elucidate the novice's conception of

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the genius of his own language, but rather to befog and confuse it with a form of expression wholly foreign to it. All that is said about the inherent difficulties of the task as recommending it I must pass over as unworthy of modern conceptions of education. But, even admitted to consideration, a knotty problem in logic is not necessarily an exercise in the expression of thought.

If from a different point of view it be maintained, with regard to the pupil's language profit from the study of Latin, that the philology of English derivation from Latin is profitable to the pupil, it must in truth and candor be admitted that the pupil who takes an active interest in the etymologies when pointed out, not to say the one who delights in making their discovery, is a *rara avis*. And even if it were otherwise, the fact that its vocabulary is basal to that of English would be a doubtful reason for enforcing the general study of Latin.

With regard to the ground taken by Professor Bennett upon the matter of struggling directly with language itself when the pupil has no thought to express, and is, as he admits gaining no positive knowledge, but "is learning to differentiate related concepts," a more reckless disregard of the facts of educational process could scarcely be taken. Not even the Committee of Ten will bear out the theory here maintained, which aims to equip a boy with contentless words and turns of phrase that when he grows up and learns to think he may have "that indispensable equipment of the educated man, the capacity to say what he says with directness, clearness, precision and effect." It is as idle as the remark itself, perhaps, simply to deny it, for both the remark and the denial should be brought to trial in experiment. But neither is without a burden of proof, and nothing could be much harder than to put the finger upon an iota of acceptable offhand evidence that exercise in the niceties of translation really contributes to facility and perfection of expression when the thoughts mature toward which the phrases in translation may be supposed to look. If it be maintained that the power to phrase with precision is being learned in a general way the burden of proof upon the statement is but the heavier, for investigations of the spread and efficacy of general ability throw constantly increasing doubt upon there being any such thing.

Translations are even proposed by Professor Bennett to take the place of much of the composition work of the secondary school, urging that it is better to reproduce the lofty thoughts of a Cicero than to try to express thoughts of our own where they scarcely exist. A case may easily be weakened by pushing it too far. Urge for Latin the magic power of storing away in the youthful mind profitable means of expres-

sion when thoughts shall finally come that need those means! but do not push the point to the absurdity of making expression such an external, artificial thing that it may even be supplanted by something that is not expression. Expression is not mere re-presentation, if so, a typewriter or a printing press might be said to express. But it involves assimilation, a stage of thought digestion that translation may entirely avoid. If it be true that good composition is hard to get from the secondary pupil, the case is but the stronger against closing the many rich avenues of approach to a modern world full of things to be known and expressed, by an endless drill of the contentless mind upon little daily portions of an all but contentless foreign matter. The world is full of living matter for real expression, but the Latinist who is bent on training an empty mind to be ready to hold a content when it gets it is certainly not even making the most of his inherently weak case. Such doctrine, if it were not so well overwrought with plausible appeals to the dogma of formal discipline, would be forthwith incontinently drummed out of the pedagogical camp.

Professor Bennett could not have done better in choosing a statement of this dogma than to take, as he has, that of President Eliot. No subject of the curriculum could fail to present an equally strong case. Yet Latin is shown to furnish the best training in "observing accurately, recording correctly, comparing, grouping and inferring justly, and in expressing the result of these operations with clearness and force;" which is President Eliot's formula. It is amusing to see how the generalization of one who undoubtedly has natural science in view as fulfilling the conditions of the recipe, serves perfectly the purposes of another when standing for a subject which the maker of the prescription would probably say least fulfilled its conditions. The instructive feature of the episode is that one has set a blunder as a model to the other, and the other has gravely elaborated the most indefensible feature of the blunder. President Eliot's formula is the test applied by the several committees on secondary subjects, each to its particular subject, resulting in reports which clearly pointed out the intellectual ability which each subject by its magic alchemy had the power to produce. Certainly the only hope of effective truce in the warfare between science and humanism (so called) can come when both sides refuse to be betrayed into a sophistic defence upon claims so untenable as those of formal training.

No branch of knowledge may justly be declaimed against as knowledge, but no branch of knowledge can in justice be accorded an unproved right to pose as the gatekeeper to other worlds of knowledge; and less still the right to represent itself as a necessary means of producing the capacity for other

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knowledge. When these distinctions shall have been done away with as they deserve, all subjects of education will, as they deserve, have a fair field and no favor.

This is not hopelessly forsaking the persistence of the principle mentioned at the outset that each generation gravitates toward an adequate conception of its educational needs. The fact that Latin and Greek remain strongly entrenched on an eminence which tradition has fortified for them, and are even now making successful sallies and raids with acquisition of territory is but proof of two things: first, that they have the strongest men in their camp as might be expected, and second, that the gravity of time is a longer process than can be appreciated by each generation which sees only a section of its course. Out of discussion will come an appreciation of the grounds of defence, with a better measure of the opponent and his ground; and better yet there will come in time, when the futility of mere argument has made itself felt, a willingness to submit educational theories to the same ordeal of scientific test to which other theories are submitted. Whatever canons of reasoning men hold themselves to in other matters, partisanship, to some extent in educational matters even as in religion, will again and again compel them to desert.

Principal MacKenzie is quoted as comparing the status of a school before and after an interval of twenty-three years. 'wenty-three years ago, when *he* was a boy, the academy he attended had "brilliant achievements in developing mental power with Latin as the staff of the pupil's mental life." After twenty-three years during which the only change of which any note is made, in pupils, teachers, aims of parents and conditions of home life, character of the community, ideals set by society, etc., etc., is the fact that this academy, like others, has meanwhile "established an English side without Latin," which has resulted in "an unfavorable change in the intellectual tone and character of the institution." The same witness says he has not met one teacher (among those of the *Association of Colleges and Preparatory Schools* in the Middle States and Maryland—then in session) who, administering courses of study both with and without one or two of the classical languages, does not affirm that satisfactory scholarship is found only on the so-called classical side, and that therefore, no satisfactory substitute for Greek and Latin has yet been found. It would be fair to know whether the teachers interviewed were "taken as they came," as well as whether they had any actual evidence upon which to base such sweeping statements, and it would not come amiss in giving due weight to their judgments to know what their standards of "satisfactory scholarship" were. These points must be insisted upon before we frame

into our educational creed the remark quoted from President Benjamin Ide Wheeler that French and German cannot compare with the classics as *effective instruments* of secondary education "simply because they don't."

Professor Bennett makes a comparison between Latin and modern languages, but as the comparison is on the relative disciplinary merits of the two it could have no part in my purpose. His conclusion of the valuation of subjects is: "Latin I should insist upon as the basal study for all pupils of the secondary school who are capable of pursuing it. More than two languages (Latin for four years, and Greek, German or French for three years) I should not suggest for an individual pupil, though I am well aware that the colleges are enforcing demands in this direction. With all the advantages and allurements of language study I feel that we can easily go too far, and may do damage by neglecting *other sides* of the pupil's intellect." One might have supposed that he had completely boxed the compass of the pupil's intellect in the application of President Eliot's formula. His conclusion is that the primary ends of Latin study in the secondary school are "the power of accurate observation, the development of the reasoning faculties, and the superior facilities it affords for training in our own language. . . . . Incidentally, too, we considered," he says, "the fact that the study of Latin gives us the needed insight into the precise meaning of a vast number of English words derived from Latin, and that by taking us out of ourselves the study of Roman life and thought gives us a broader view of the significance of ideas and institutions." Beyond this there are claims of less importance of historical training and æsthetic training which are ascribed to the study of Latin.

Very naturally in dealing with the objections which have been made to the study of the classics, Professor Bennett deals first with those of Herbert Spencer. It is interesting to notice that neither Mr. Spencer nor Professor Bain, who is next quoted, affords any satisfaction to his critic by giving attention to the formal training claims of the subjects under discussion. Mr. Spencer's insistence upon the meaning and paramount value of content in a subject of study finds no point of contact with Professor Bennett's line of reasoning. So also with respect to Professor Bain's arguments. There is a refutation of such objections as these: "(1) The cost of classical study is great. (2) The mixture of conflicting studies distracts the learner. (3) The study is devoid of interest. (4) The classics inculcate the evil of pandering to authority." As to his own argument for the study of Latin he complains that "Bain practically ignores the transcendent value of the increased intellectual power derived from the study of the classics, and the

mastery acquired over the resources of one's mother tongue, *i. e.*, over the ideas which form the highest intellectual elements of our national life—the very things which we set down above as constituting the prime reason for studying Latin."

All would agree with Professor Bennett that Professor Frederick Paulsen's critique of Latin in German schools would have a much modified application to American schools where it would have any; but in its estimate of the results of an exclusive adherence to the classics in the German schools in times past and in their failure to produce the character and attainments claimed as their natural fruit, it is much more instructive and far reaching than the briefer history of our own secondary instruction can illustrate. Yet there is a fact in our own secondary education which is strikingly called to mind by Prof. Bennett's comment on Professor Paulsen's argument that men who have enjoyed the classical training in the *gymnasien* are a unit for its retention; so favor it, not because they are moved to do so by an appreciation of the value of the training they received, but because they wish to perpetuate the caste to which this education preserves them. Certainly it is true, as Professor Bennett says, that "in this country no one will charge the existence of such sentiments as a factor in the adjustment of educational problems." Not *such* sentiments, but sentiments which bear a close relation to them because they are produced by the same cause. As I have already suggested the leading men in the last few decades during which secondary education has been receiving anything like adequate attention in America, have been, by reason of the very nature of secondary instruction hitherto, men of classical leanings, because the best education had been—and I am inclined to think, in point of efficiency, still is—in the classical courses. The prestige of classical instruction is ancient in its reputation compared with other courses. It is men who are the product of these courses who have hitherto, and still, largely set the standards for secondary schools' ambitions. If ever a sentiment had an opportunity to maintain itself by inbreeding, the ideals of classical scholarship have had that opportunity. What else could there be if the mere force of human conservatism has held out successfully with a good thing against the innovations of a better? What wonder if this American aristocracy of culture has made the most of its European exemplars and has cultivated successfully the sentiment Professor Bennett finally descends to in a further comment upon Professor Paulsen's arguments? The latter is quoted: "All the fine phrases about discipline and culture supposed to result from language study are likely to make no appeal to sturdy common sense." Then the comment: "If by sturdy common sense is meant," says Professor Bennett, "the

instinctive conclusion of the common man who has given no serious thought to the problems of education, Paulsen is probably right, but can we safely entrust the interests of our higher education to such hands?"

I could not find a better concrete illustration of the straits of our public secondary education. The best men in secondary education, or who evince a special interest in its problems, are in private, or college preparatory schools, or colleges and universities. These men never have been, and probably never will be, able to appreciate just the educational needs of the ordinary, small, local public high school of limited resources. *Secondary education has never come to mean to them anything but college preparation.* If it is true that the "instinctive conclusion of the common man" is not to be relied upon for establishing the criteria of education, it is nevertheless such men that make up the communities in which these schools are located; directly or indirectly they will, at least, choose their leadership, and sad is the plight of the communities of common men whose instinctive conclusions are supplemented only by the leadership of blind guides!

As a matter of fact the assumption of such leadership has been made by the universities, and sorry work they have made of some of the vital educational interests of the common man. When the atmosphere has cleared in spots from the smoke of prejudice which has blinded the common man to some of the fallacies he has been led to adhere to, there will be a chance to make some real adjustment of schools to the needs of communities in which they are located. Whatever may be the triviality of Herbert Spencer's claims that people want to study Greek and Latin because other people do,—and the instinct of rivalry and personal pride is strong,—or whatever may be the truth of Professor Paulsen's claim that a German aristocracy is jealous of its classical prestige, there is no gainsaying the fact that many and many a poor community in the United States is blindly jealous of the reputation of its high school. This seems a common-place remark, but it gets its significance from this fact, that that community has learned from higher educational authorities than its own circle boasts that a *high school means Latin*, whatever else the poverty of the community may make it mean. If this is the legacy of an earlier age when Latin was synonymous with culture let us make the most of our knowledge of that historical fact; but whatever else we do about it let the leaders of educational thought see to it that they know the needs of their own times as well as they know those times of which they read in written history.

Just what is the meaning of the demand now made for Latin in this type of school? What does it mean to say that pupils

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need it for admission to college? It is true that a comparatively small percentage of these pupils go to college. And it is also true that a rather small percentage of the pupils of the high school persist to finish its course. But neither of these is the most significant fact. The fact which calls for a reckoning with the leaders of educational thought who have made those schools what they are, is that what they have made them is expensive luxuries, maintained by the community and yet not justly participated in by the whole community. Nor are the members of those communities prepared to make a protest which will reach the case. It is not the fashion for public spirited men to complain of taxation which maintains so salutary an institution as the public school. Their good nature and long suffering are an element of delay as well as of ultimate hope. Such a citizen is more than half persuaded that he might be a patron of the public high school, as he is a contributor to its maintenance, if he chose to *force* his boy to attend. Or he is perhaps a patron so far as his daughters are concerned; they are doing well in the high school and share with most of their girl friends in the school the expectation of teaching a while after their high school course, and perhaps a few months away at the normal school. In fact this citizen sees, if he has an eye for comparisons, that his neighbors' boys are also not in school and that, whatever the reason may be, the community is practically maintaining a high school for its girls. Perhaps it is true that the school he supports does not owe his boy educational advantages unless he chooses to conform to the course his sisters are taking. Certain it is that the girls are pursuing the course with all docility, and seem content that there is nothing in their school work which reminds them of their mother's work at home. Probably the boy is naturally rebellious against school and study as the father remembers that he himself was, before him, and if he does not like to "buckle down" to what they give him to do at school it is his loss, and he may as well quit school and go to work. The complacent State seconds his soliloquy and bestirs itself no whit to keep the boy in school by giving him what he would be not only willing but eager to do.

It would take the sophistry of the scholastics to find any contact between the life that boy is leading and is destined to lead, and the subject of Latin. No more wholesome lesson could be given to the theorizer upon the 'power' that Latin produces in his pupils—the theorizer who has in charge a large preparatory school whose constituency is the select of many communities, with only such boys as share the traditions and ambitions of classically trained parents, having collegiate ambitions which come to them as much a matter of course as their

change of voice—no more wholesome hesitation in the customary readiness with which he pronounced the term "secondary education" could come to such a teacher, than to put him in charge of a public high school in such a community as I have described. It has a satisfying sound to say that the chief mission of the secondary school is 'selective,' satisfying when one keeps one's eyes on the elect who constitute the hopeful group. But what ought the term to mean to the citizen who has sons and supports public secondary schools? What ought to be to him the value of the selection that drops his boy out of the educational race at the most critical time in the development of his life's tastes and ambitions? He seems now to be in want of an advocate who shall raise emphatic protest in the interest of a saner educational ideal. The "common man" has more than "sturdy common sense;" he has modesty in which he has sat silent to take the prescription of the educational dose-maker. Why indeed should he gainsay the professional dictum of the pedagogical doctors? They certainly ought to know what they are feeding him. The trouble is that their potion is a scholastic panacea which needs the chemical analysis of modern doubt. Latin will do this and that and the other thing for the youth, they say. Even if he choose to take it the burden of proof is upon them. Educational science demands that they prove their assertions or withdraw them. Meanwhile it is the right of every citizen, parent of sane and healthy children, that the State which assumes to educate those children furnish them with the knowledge that lives and functions in their daily lives, skill in the performance of the active interests of vocation, and practice of the principles which live in every civilized community in its economic and political institutions.

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NOTES ON ITALIAN EDUCATIONAL LITERATURE.

By ALEXANDER F. CHAMBERLAIN.

These notes are concerned with recent Italian literature of interest to students of childhood from the point of view of anthropology, psychology and pedagogy. No attempt to be exhaustive is made, the object being to indicate the general purport and value of the works considered, and to point out any notable additions to knowledge or important suggestions contained therein.

Minister Nasi. The speech of the Minister of Public Instruction, in the Senate, June 25, 1901, touches upon most of the burning questions in the Italian educational world: The absolute insufficiency of the present elementary education when face to face with the exigencies of modern life; the curriculum of the secondary schools; university discipline, freedom, endowment, instruction, etc. Of the secondary schools of to-day it may be said, as Seneca complained in his time, "the youth work more for the school than for life," and there is absolute need of applying the old principle *sequere naturam*, and making of educational institutions a continuum co-ordinated with life all along the line. While, doubtless, a crying need exists for the modification of the curriculum and the hours of study, there is reason to believe, on the other hand, that there are too many holidays, and time is not altogether economically employed at any given point. The question is not so much what to teach, but how to render the schools more educative for the social ends of modern life. The partisans of Latin and Greek must remember this, if they would retain these subjects in the curriculum. The study of Latin, Sig. Nasi thinks, will long be for Italians at once a necessity and a national duty, but Greek can put forth no such claims. If it is made optional, and few take it, the damage is not irreparable; if many take it, by reason of a *penchant* for the classics, so much the better for the cause of letters. As taught to-day in the secondary schools, even as a mental discipline, Greek is "a long and tiresome study, not at all yielding in the same space of time the fruits produced by the study of a modern language." On the question of examinations, Minister Nasi is opposed to abolishing them, or relaxing their severity too much, either in the secondary schools or in the universities. The fact that, in the faculty of Jurispru-

dence at the University of Rome, on June 17, 1900, there were examined no fewer than sixty-three candidates, although the University regulations state that no examination shall last less than twenty minutes, shows the necessity for stricter enforcement of the law. The secondary school, Sig. Nasi believes, whatever is its type, ought to be "essentially a school of general culture, independent of professional ends." Recent disturbances in the Italian Universities have caused the question of academic freedom to be a matter of prime interest, the *obligatoriness* of things in the secondary school standing out in marked contrast with the *liberty* of the Universities. The youth leaves the secondary school, where he has been treated as a boy, and enters the University, and, breathing its free air, away from home influences, instinctively makes the most of the situation. From the passive resistance of the secondary schools a transition is suddenly made to the active independence (almost anarchy) of the University. Both these exaggerated tendencies need to be tempered. Some would find a cause of the recent disturbances in the Universities in the neurasthenia produced in the secondary schools, which are nothing more nor less than nurseries of certain diseases. Be this as it may, both the restraint of the secondary schools and the liberty of the University are dangerously excessive. Under the governments of the past public education created passive obedience, the education of to-day must create in the youth of the land the habit of self-control, and to that end everything must be suppressed that tends to retard the formation of the individual conscience, which alone is capable of meeting the vicissitudes of the struggle for existence. Science must create not only great abilities, but also great wills and great feelings. The "best" of the country must no longer be merely the most learned, they must be the most worthy as well.

Intellectual Capacity of Boys and Girls. Dr. Giuseppe Bellei, whose study of mental fatigue in school-children was reviewed in an earlier number of the *Pedagogical Seminary* (Vol. VIII, p. 246), has just published a brief *résumé* of the results of his investigation of "the intellectual capacity of boys and girls in the fifth elementary class" of the Bologna schools,—340 boys and 140 girls of an average age of 11 years and 10 months. The test employed was the Ebbinghaus method of prose with omitted words and syllables to be filled in by the pupils, the latter having had the method of work explained to them beforehand and being given preliminary tests. The general result reached was that of the children in question "the girls are more developed intellectually than the boys." Ebbinghaus found, in his investigation, that only beyond 15 years were the girls superior to the boys, but Bellei discovered this superiority in the quality of work of girls in pupils with an average age be-

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tween 11 and 12 years. The Italian girls, under all conditions of the test, gave a higher average of work well done and a lower percentage of errors than the boys.

Psychology of Deaf-Mutes. Dr. Rossi gives the results of an interesting study of the duration of the simple psychic processes in deaf-mutes as compared with normal individuals. The subjects of experiment were five in each case of normal individuals, non-educated deaf-mutes, congenital deaf-mutes, and deaf-mutes by acquisition,—all between 13 and 20 years of age. All were experimented with on the ball of the middle finger of the left hand, and on the lower third of the left forearm. Time of simple reaction, time of reaction with discrimination, time of discrimination, time of reaction with discrimination and selection, time of selection, were recorded. The results show the inferiority of the uneducated deaf-mutes as compared with the educated, likewise the inferiority of those with congenital as compared with those with acquired deaf-mutism.

The Pedagogical Laboratory of Crevalcore. From the brief account given by Dr. Ferrari, it appears that on May 2, 1901, there was inaugurated at Crevalcore (near Bologna,) Dr. Pizzoli's "Laboratory of Scientific Pedagogy" which begins its real life under the patronage of Professor Tamburini and the National Pedagogical Association of Rome, although it has had an earlier existence of some two years. Here are assembled a large number of instruments and devices for studying children from the point of view of pedagogical anatomy, physiology, and psychology. Also the results of the scientific activities of Dr. Pizzoli and assistants selected from among the University students and the teachers of the city, the measurements of 800 children belonging to the Crevalcore kindergarten and elementary schools. Many of the instruments are ingenious inventions of Dr. Pizzoli, others modifications of those already in use in psychological laboratories.

Education and Psycho-physical Development. Natalizio Marotta's "Education in the Psycho-physical Development of Man," which forms the initial volume of the "Biblioteca di Filosofia e Pedagogia," discusses in its nine chapters the following subjects: Hours of study, play, and educational reform; thermometric sensations; science and the school; courage in education; speech and sex; kisses; ear rings; the logical tendency in pedagogy; effects of imagination, anger, and fear in the mother upon the child. These essays have previously appeared in various educational periodicals. The author, who is a teacher, is given high praise by Professor Sergi, who furnishes a brief introduction.

Marotta favors the reduction of the number of school hours, "but not to have the child return to the house after his short

studies, there to degenerate,—that would be jumping from the frying-pan into the fire." For the little child to remain from four to five hours in school to do what is ordinarily accomplished there, is too much. One way out is to reduce the didactic programme and develop more the programme of manual labor, drawing, singing, and gymnastics. Walking on fine days ought to be an important means of physical, intellectual, and moral education. When the home conditions have improved, the school hours can be reduced to give the family its rightful share in the task of education. Play ought to be introduced into the primary schools, but it must follow "the natural activity of mental evolution associated with movements," and not seek to separate things that have been joined together from the origin of the race and of the individual.

That conditions of heat and cold have some relation to the development of human genius, racial and individual, may readily be believed, and these factors ought not to be overlooked in education. Good and bad weather, too, have their stimulating or their restraining influences, as the records of many schools show. Even in children there are often discernible traces of something like the winter-torpidity of certain of the lower animals. Rain and sunshine have their easily noticeable effects. Man is still too near the animals, and too near nature, to escape altogether from the common lot. Children, naturally, are sometimes the most susceptible of all.

No efficacious and healthy education is possible, whose creations in man are out of harmony with nature. The field of nature is the most opportune source of real education, for it is his native environment, outside of which he cannot fully live. Here the child is often like a huge sponge, or Dante's she wolf, hungrier after being fed. To exercise its bodily and mental organs harmoniously and naturally in this environment is the task of the new education. Guided by science, the teacher and the parent lead the child through nature unto nature's health of body and of mind. Simply to help the child in this activity with apt and timely suggestion, not domination or tyranny, is the whole of education, physical, artistic, intellectual, and moral. Food, motion, air, light, these are indispensable to the child, at home and at school. The genius of childhood dwarfs when they are stinted.

The egoism that is merely the expression of brute life should pass away through the influence of the school, and altruism be made the countersign of true civilization. Lack of courage is the cause of a good part of human miseries,—so many know their duty in life but do not possess strength or courage to perform it. Song, wedded to music, is a great teacher of true courage and generous affections its natural allies. The things

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that sustain life, not those that enfeeble it, are the real factors of education. Not in brutal, but in human terms, the school can verify the proverb, "better live a day like a lion, than twenty years like a sheep." The child is as eager to speak as he is to eat, or to destroy. Long ago Dante recognized the power of women in the diffusion of the common speech. Latin has passed away in England, and even in Italy, but the tongue of the women has survived in each case, the attempt of the men to attach the destinies of the national literatures to dead languages having completely failed. It is the domestic tongue that lives on. The greater the influence of women in society, the greater their influence upon the speech of the family, the city, the nation. Perhaps it is because women resemble children that they exceed men in fluency and in frequency of speech. For the teacher, a knowledge of the relations subsisting between the development of the vocal organs and that of the sexual organs is of great importance. During the pubertal epoch, and at each menstruation, girls need to be carefully watched in their language, singing, etc. In their love for their little ones, parents often expand in a fury of kisses, become a little anthropophagous in fact, forgetting, as relatives and friends also do, that their germ-laden osculations, their insistencies, their "assault and battery" (for frequently it amounts to that), are by no means without evil results upon the child himself. The baby needs to be protected from its friends. Affection and toknophily are admirable human traits, but here, as so often elsewhere, the golden mean is best. The best breath of life the baby has is its own; to add to it, as well as to take from it, is dangerous.

A polemic against ear-rings is more necessary in Italy than it is in America. In southern Europe ear-piercing survives for all sorts of reasons, some of them connected with folk-superstitions, and the barbaric custom of wearing ear-rings is still much in vogue.

Concerning the method of pedagogy, Marotta is one with Herbert Spencer in holding that the distribution of studies, etc., ought to correspond to the order of evolution and mode of activity of the several faculties, ought to not logical but evolutional, or developmental. The teacher ought to be rather an Orpheus than a drill-sergeant. To educate does not mean to present to the mind useful cognitions, but to induce habits, to develop abilities. Science without art, and art without science, alike avail nothing. Art of itself cannot produce morality; it is rather an indirect and a negative, than a direct and a positive factor of virtue. Hence its educational value must not be exaggerated. Besides bending its energies towards developing the good tendencies and characteristics of man, the real edu-

cation ought also to turn as far as possible to the good and abnormal dispositions, the evil inclinations, etc., of the individual and of the race. Education must do its best to make variations no longer run in wrong directions. There is not a little truth in the observation of Lombroso that "anger is an elementary feeling of man, which we may direct, but not hope to extirpate." The ethical employment of anger is one of the needs of our present society. So, too, with many other things generally conceived as hopelessly evil. From the standpoint of science "the educative influence is in inverse proportion to the distance between the being to be educated and the educator." The method of Jesus and the method of science are one and the same. As with Christology, magistrology is the added mythus.

The influence of the imagination of the mother, Marotta thinks, "is greater the less the age of the fœtus." If this is true, the mother ought to be shielded and protected in innumerable ways against the strenuosities of fear, anger, grief, etc., and have from the earliest beginnings of pregnancy (throughout all married life, rather) the intelligent and sympathetic co-operation of her husband. The author seems too credulous in the matter of "maternal impressions," but it is difficult for one born under the sunny skies of Italy not to see more in such things than do the children of the colder North.

Nature Study. The second volume of the series noted above, also by Marotta, "Pro Cerere," is a panegyric of agriculture and related subjects as educational material for the school. The ten (some very brief) chapters are essays gathered together from various educational periodicals to which the author has contributed them during the last few years, and treat of the following topics: A new idea; criteria of agrarian instruction; Ceres will triumph; flowers and perfumes; ornithology; apiculture; agriculture and female education; the cult of Ceres; gain; the festival of Ceres.

Although the question was mooted in 1876, the movement for the introduction of agricultural education into the normal and primary schools is really the work of former Minister of Public Instruction Baccelli, whose famous exclamation, "let us make the new generations love the fields," was enthusiastically caught up all over Italy. In the teaching of agriculture "are united, in apt and progressive concentration, fit and scientific eurhythmia, the ideas of geology, botany, zoölogy, chemistry, economic science." The study of agriculture in the primary schools is not intended to turn out farmers, any more than the object of the school is to turn out mathematicians, *littérateurs*, or atheletes, but to develop, in all the faculties, the inherited potencies, the aptitudes of the children to be educated, and to

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instill in them a love for agriculture,—a thing at the basis of so much of the national prosperity, nay existence. To get them acquainted with the soil, the plants, the useful and noxious animals, the chemistry of growth, food, etc., will surely make them better citizens and better men and women. To know how to use the soil, when virgin and when exhausted, carries with it lessons even of social import. Sig. Marotta is of opinion that the "model fields" are of doubtful utility, and may be replaced by plots or vases in the homes of the pupils or at school. For agriculture, as for manual labor, the work can be done at home, the rational method having been learnt at school, and the results reported to the teacher. The circular of Minister Baccelli of July 20, 1899, will rank high among the pedagogic projects of the century. The "triumph of Ceres," which it makes certain, will be not merely an economic blessing, but also an ethical one. The "return to the fields" was good for Italy too intoxicated with idealism. To pupil and teacher alike some knowledge of the psychological and physiological effects of flowers and perfumes is of advantage. At present, however, we have none too much information concerning the senses of taste and smell in children. There is evil as well as good in perfumes, and Perez was not altogether wrong in preferring the child who liked the odor of the kitchen above the one keen for artificial perfumes.

Ornithology, perhaps, has largest claim to the one hour of poetry, which every day ought to contain. For in their natural environment, the study of birds is close to the heart of the Muses. Here the school can touch the heart of the child, and teach him indirectly, and therefore, in best fashion, a thousand lessons of social, ethical, artistic, and philosophic import. Apiculture, too, may readily enough find a place in the curriculum.

The bee, so loved of the poets, naturally appeals to the child, while the honey it produces adds a very real sweetness to the light of knowledge. As to female education, Marotta agrees with Bencivenni in looking upon the apiary as another fact making the school more like what it should be,—the home.

For women horticulture, from the earliest developments of human culture in general, has always had evolutional justification. In the care of a garden woman can find a physical stimulus well suited to her organism, and some at least, of the real poetry of life. And under her guidance, children enter an earthly Paradise. Schools of horticulture for women such as those founded in Russia by the Baroness Budberg, the English school at Swanley, the German schools at Placen, etc., the great school at Heverlè near Louvain, and others have accomplished a vast amount of good. Minister Baccelli, in his campaign for the "cult of Ceres," the return to nature, recommended among

other things, the adoption of the American "Arbor Day," and the resurrection in a reasonable way of the ancient arboriculture as a national religious-educational experience. In these so degenerate days, the motto of the schools might well be: "To the fields, to the woods, to the workshop."

The *Casa Benefica* in Turin, and the Garavanta school in Genoa, whose policy in dealing with juvenile derelicts is to let them on entering choose the trade most pleasing to them, and then allow them to pursue it in freedom and with remuneration as in real, honorable life. Part of the money earned goes towards the cost of maintaining the youths, while part is deposited to their credit for use when leaving the establishment. The *Casa Benefica* has no laboratory or workshops of its own, but sends the youth to learn a trade or art in certain workshops in the city. The results of these efforts at trusting, helping, and making derelicts into honest and useful men have been remarkable. The workman has been shown to be worthy of his hire.

At the International Agricultural Exposition, inaugurated with such successful results May 27, 1899, there floated triumphantly a banner, with the inscription, "Return to work! Let us make the new generation love the fields!" There the primary school did honor to Ceres, defending the ancient thesis: *Non scholæ, sed vitæ discimus.*

The "Child World." The seven sections of Ferriani's little book treat of the following topics: The right to the family, Pain in children, Little prisoners, Home and school, Little martyrs, Leaving school, Puppets and stories. The author, at one and the same time a magistrate and a man of literary tastes, synthetizes in these interesting essays the many studies embodied in some of his numerous larger publications relating to the nature and problems of childhood. In the first essay Ferriani argues for the restriction of the right to have families to those who do not belong to the degenerate, physically, mentally, or morally, unfit, or criminal classes. Human reproductive life ought to be at least as well protected as animal. Here the social function needs to be preventative rather than curative. Statistics are proving more and more the need of this, for, as Goethe said, "if figures do not govern the world, they show how it is governed." To refuse the suffrage, and yet grant to the same individual the right to found a family, to deny him the power to sign a check, but permit him to beget offspring, are strange phenomena of modern society. Surely *statesmen* can learn something from *sportsmen*, and educators from breeders of animals. As long as we have criminal matrimony we shall have criminal children. Heredity will help us only when we help ourselves.

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In the discussion of "Pain in Children," the idea of the absolute happiness of childhood is dismissed as a literary and parental fiction, whose creators and sustainers are too much bent upon making beautiful rhymes (*divino, e. g.*) for *bambino*. Childhood has its pain-bearers, no less than its laughers and smilers. Absence of true family life, existence away from home, the tyranny of schools, give birth to pains innumerable which, openly expressed or badly masked, twist and cramp the face and soul of childhood. It is a mistake to assume that all the pains of childhood are transitory, dying with the minute, the hour, or the day. Some of them it is vain to attempt to kiss away, to abolish by caresses or by gifts, to visit with punishment or ridicule, for such remedies have often dire results. Nor must the parent or the educator believe that childhood should be one round of happiness, uninterrupted by a single tear. The pain of childhood is no mere transitory phenomenon to be passed over lightly, but a factor of evolution, which wise hands may convert into a delicate instrument of education, making the memory of sound and strong childhood serve as a spur to lofty things.

"Little Prisoners" are of all those in durance vile the most painful spectacle, unless, indeed, it is the child-life that has furnished such "candidates for crime." The real criminal, though, is (to use the words of Victor Hugo) not the little malefactor himself but the society that incarcerated him. The physical and moral diseases of children are not to be cured by penal codes and jails. Prevention, not repression, is the duty of society. The all important question is not "to make the punishment fit the crime," but "what has society done to prevent it?" An adult in prison is a fearful comment upon modern social institutions, but what if a child is there? Woe unto those who have caused these little ones to stumble!

The section on "Home and School" treats briefly of family and teacher, educational literature, the ironies of instruction, exaggeration, hygienic fatigue, emulation, gay and serious children. Compulsory education is no panacea. Better far to reform the home environment, change economic conditions, create sympathetic pedagogic *milieux*. There is all too much truth in the saying of Villari "less instruction, and a little more bread." The harmony of the family and the school, the sympathetic development of the exterior and the interior life, these are the things needed. The goodness of the school depends not upon quantity, but upon quality. The supreme concept is that of Bourget, "the complete identity of education and life." Literature for children is a desert with very few oases. A field rioting in fungi, with no flowers. Yet here is the noblest and finest branch of all literature. For, just as a good primary

teacher outweighs more than one University professor, so a writer who knows how to educate, to instruct, by pleasing children, exceeds every other in social value. To create for children a healthy, joyous literature is the task of the day. To write for children as a pastime, to compile anthologies, to manufacture "children's libraries," to shape adult's books for the use of the young,—these things are unreal, rife with psychological and pedagogical negations, and far removed from the demands of real childhood. Instruction without real education is a promoter rather than an extinguisher of crime. The "bread of the soul" must be preceded by the "bread of the body," there must be less grammar and better meals in the early stages of school life. Good teachers cannot do their best until they have good pupils in every sense of the term. One of the ironies of instruction is the contact of the best teacher and the breakfastless child. Exaggeration is one of the predominant faults of childhood, and is "carnal sister of lying." It is due in part to human nature, in part to environment, and in part to education. Not a little of it flows from the present "education" of woman, who is taught "a good deal of French, a lot of pianoforte, and a bit of Italian, but nothing of that psychic energy that strengthens conscience, tempers instincts, tames reason, combats exaggeration (mother of so many evils),—in fine, forms character." The fatigue and overburdening characterizing the schools of to-day are a fertile cause of juvenile degeneracy and crime. Absolutely different is the hygienic fatigue, which is born of healthy action, bodily and mental, and is a factor of the highest importance in the sane and normal development of the child. Abnormal fatigue can be prevented, and "hygienic fatigue" promoted, by changing the school from an "institution of instruction" into an "institution of education." Before emulation can be of any real lasting value in education there must be absolute harmony between teachers and parents, between home and school. To make emulation succeed, the example in school and the example in the home must both be noble, pure and good. Examples of other better children, tales with two eternal protagonists (good, bad), scholastic rhetoric, visions of prizes at the end of the year,—all that is the dangerous old, that must give way to the helpful new. To develop the good, the true and the beautiful whose germs are already in the child rather than to borrow these for him is the real emulation. Teach him to be good that others may not suffer, not to be good by emulating those who do not suffer. In childhood, nothing is childish, neither smile nor tear, gaiety nor seriousness. There are a natural gaiety and a natural seriousness, both having their proper time and season, their ebulli-

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tions and exaggerations, but in normal childhood the gay wins over the sad, play over the long face.

The martyrdoms of childhood are innumerable, where unnatural mothers, careless or cruel fathers, mercenary relatives, and greedy employers, abuse, neglect and exploit the tender years of life. Many children belong not in the census of the living, but are to be counted with the dead,—walking corpses in the flower of childhood. Fearful are the psychic consequences of this less than animal life of so many little ones. All denounce a traitor to his country; how few denounce as strenuously a traitor to his family! And without the family what is the country?

Oftentimes the school is but an inn, where when the term is ended, the teacher forgets his pupils, as the inn-keeper his guests of a day. Many acquaintances, few friendships, are formed there. Many teachers, few educators, few who live in the child world and have its *savoir vivre*. Leaving school is a psychological treatise for those to read who can. The rejoicings at close of school, the hurrahs that greet the announcement of holidays, the activity of body and mind that succeeds the constraint and unnaturalness of school-time, are not all signs of evil. The teacher who burdens a holiday with scholastic tasks, the parasitic pupil who will study on holidays to run ahead of his fellows, are alike unlovely. The types in the school reveal the types in the home,—father, mother, adult and other relatives, servants, friends, strangers, all leave their mark. Old are the words of Horace, "Qui vetat ridendo dicere verum?" older far the thought they clothe. Puppets and stories for childhood the world will not readily let die. Amusement ought to occupy the first place in the education of the child, amusement that strengthens its body and bodily organs, develops gradually its intellect, and educates its soul. But the amusements and diversions of childhood are not those of adults. To reward the good child by taking him to the adult theatre, or musical concert, is committing a pedagogical and a psychological crime. The right thing for childhood, as the ancients knew, is puppet-shows and stories told *viva voce*. And in story-telling, there is no need for making the tales the same for all children. Italian children, *e. g.*, need something more in harmony with their own national and individual genius than "some of the melancholy Russian stories, the excessively symbolic German ones, the too mystic English, or the too fantastic Spanish tales." Here, too, we must remember that there is nothing childish about childhood.

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LITERATURE.

La Democrazia nella Religione e nella Scienza. Studi sull'America. ANGELO MOSSO. Milano: Fratelli Treves, 1901. pp. 431.

This volume is no ordinary *Reisbericht* or conventional *Impressions de Voyage*. Alpine climber and expert on physical culture, physiologist and professor in the University of Turin, friend of the late king and member of the Italian Senate, the author is an all-round man of science, whose mind and heart have never been estranged from human interests, and whose personality is touched with the fire no less than with the art of Italy. Few, if any, have come to America better equipped for the task of studying its people and its institutions in the brief time that the genius of foreign lands can be asked to spend with us. The titles of the eleven chapters of the book,—The Country, the American People, The Race Question, Democracy and Religion, Lukewarmness of Religious Feeling, Protestant Universities, Catholic Universities and Canada, "Americanism," The Modern Spirit in Education, The Masses and the New Aristocracy, Primitive America,—indicate how he has seized the essential problems of the New World's civilization. A most valuable feature of these studies is the comparisons, which from time to time the author makes between America and southern Europe, parallels that traverse every field of cosmic and human activity, from the landscape, to the President of the Republic.

In the opening chapter the resemblance of the physical features and natural environment of America to those of prehistoric central and southern Europe are discussed and some interesting deductions made. The environs of Boston and New York made Professor Mosso feel at home, as if in parts of Italy, but the nostalgia of travel beset him in the "far West." The precocity of American civilization (largely maritime to begin with), the paradoxical contest between the farmers and the railroads, the transition from rurality to industry, are all noted and the opinion expressed (p. 21) that "the period of [internal] expansion has passed, and America is approaching rapidly the conditions of modern Europe."

Of the American people the author has many wise and witty and some rather unflattering things to say. The way the Yankee, who may be the *super homo*, "hustles" surprised him, but supported his theory of the connection of movement and civilization. To see Americans work, run, eat, drink, smoke, play, go to church, and govern themselves, and observe himself their famous "nervousness," were well worth crossing the ocean for. The American, as compared with the Italian, is more sensitive to heat and cold, drinks more, eats less (but in greater variety), has much worse teeth and a more fragile, nervous constitution generally, commits suicide oftener, begets fewer children, is less outwardly expressive in his affections, is much more optimistic as to the future of his country, considers his religion more a personal (less a sectarian or a political matter), and, in some other respects, resembles more the ancient Greeks than the modern Romans. The nervousness of Americans has not yet become pathological, Professor Mosso thinks, and a good deal of it comes not from ice-water or pies, but arises from the fact that the land has been peopled by immigrants and it has always been the nervous, the dissatisfied with their own environ-

ment, who have emigrated. Some of it also he attributes to alcoholism, but the characterization of the two classes of Americans on page 50, while neatly epigrammatic is very far-fetched, and elsewhere throughout the book (as, *e. g.*, page 279, with respect to classics in the colleges) there are a few exaggerated statements. The spectacle of democracy helping imperialism he attributes to the self-sureness of current American optimism.

The race question is treated in a very interesting fashion. America, the author tells us (and for the physiologist there are no race-differences,—the nervous system of mankind is all one,—but only results of climate and education), is "the best country in the world for convincing us that we must not attach too much importance to race." (P. 80.) Nowhere in the wide world are the effects of environment and education better exemplified than in America, where Celt and Teuton, with a dash of many other races, are gradually becoming unified by a process that is powerful enough in time to absorb even the negro when occasion suits. To Mosso, as to De Tocqueville, three-quarters of a century ago, America is essentially a religious country, but its religious phenomena are sometimes very paradoxical to the mind of an educated foreigner, a man of science, in particular. God is not recognized in the constitution, and there is no State church, but scarcely a meeting, from the monthly reunions of a society of very local import, to the sessions of Congress, is opened without the word of a clergyman, and the Sunday quiet of many of the large cities (to say nothing of other sections), the existence of Thanksgiving Day, the prominence of the Episcopal church, the popularity of revivals and camp-meetings, indicate the religiosity of American democracy. But under it all the author sees the leaven of science. The religion of the future will be neither Protestantism nor Catholicism, but, if it come, as well it may, from America, science with all the poetry of religion and none of its miracles. And to that outcome, cradled in the truths of evolution, three great Americans will have each contributed not a little,—Emerson, Theodore Parker, and Father Isaac Hecker. The chapter on "Americanism" (*i. e.*, Catholicism of the American sort) is devoted to the discussion of the movement associated with the last of these. Between the Protestant sectarian universities generally and the Catholic, in respect to certain matters, Professor Mosso sees comparatively little difference since so large a number of the former have never given full adhesion to the democratic spirit of modern American science. Among the things that struck him forcibly in the matter of University Education in this country are: The opposition to the idea of a national university at Washington and the neglect generally of the educational opportunities at the capital of the nation; the "birth and death of colleges and universities;" the "despotic power" of college presidents (unheard of in Italy, where the Rector is a different personage altogether); the curtailment of academic freedom in marked instances; the burden of lecturing imposed upon professors; the recitative system for students, etc. On all of these questions he gives us some pregnant word or sentiment. The Catholic clergy of the United States he ranks above those of his own country in university matters, but the people of Quebec he likens to the celebrated mammoth of Pallas, and thinks they offer to the psychologist a noteworthy example of arrested development. The University (English) of McGill in Montreal he praises as having a medical department ranking with those of European Institutions. It is unfortunate that he was unable to give thorough-going attention to English-speaking Canada, although, as a matter of fact, much of that country is being rapidly Americanized, and annexation to the United States is its ultimate destiny. That in Amer-

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ica nearly all of the great universities began under religious auspices, is, Professor Mosso points out, in contrast with the phenomena of their rise in Italy, where theological faculties were often the last to be instituted. A rather surprising thing is the greater conservatism of the cultured classes in the United States in matters of religion; and the illiberalism rampant in a country professedly and constitutionally free is likewise rather unexpected.

With respect to educational matters, pure and simple, the author detects a strange mixture of the old and the new. The gown, which European students and professors would like to relinquish altogether, finds a hearty welcome over-sea, and it seems as if America would furnish to Latin the last shelter it will meet with in secondary education. The American youth, too, is, at college *in statu pupillari*, in absolute contrast to his position in the family, where he enjoys almost absolute freedom. And America, more than any other country in the world, illustrates the vanity of instruction at school without education in the family. With, perhaps, worse institutions in some cases than exist in Europe the American student gets better results,—he works more, "insists on himself" more, and gets that "contact with life," which is the essence of democratic education, far outweighing the mass of "theoretical preparation" received by the European youth. But after all, it may be that both American professors and students make a mistake physiologically, in laboring too hard, unnecessarily, the higher salary (as compared with that of Europeans) and higher rewards they receive, being all too often accompanied for life by more than their share of the common nervousness. The American belief in University Extension and the short road of the "Summer School" is noted, but it is not always true that these summer courses are given "by professors who work less during the rest of the year," The industrial bent of America has made itself felt in the "practical" sides of many of her highest institutions of learning, but her greatest glory is her democratic public school system, the real secret of her immense power in the world.

In his discussion of "the masses and the new aristocracy," the author expresses surprise that the great majority of Americans have permitted the rise of a small minority of wealthy men, whose power is every year being more noticeably felt, and of the trusts, one of the great banes of politics. One reason for this, he thinks, is the natural desire of the American *per se* to enrich himself and his disinclination to bar the way to the accumulation of great fortunes. The present benevolence of the rich is curiously paralleled in Italy in the age of rich merchants during the last of the mediæval epoch; indeed, America of to-day simulates older Italy more than is generally thought. The power of the President, really "greater than that of the King of Italy, or even than that of the Emperor of Germany," impressed the author much; likewise the "spoils system," and the multitude of lawyers in politics, and the mobile and immobile paraphernalia of a presidential campaign. The automatism of the Electoral College and the failure of the people to demand any real qualifications in those seeking office are commented on with regret.

Of really primitive America Professor Mosso had a glimpse among the Montagnais during his trip to Lake St. John, in northern Quebec, and the notes he made are quite suggestive. But the virgin forests seem to have affected him more than the "disappearing Red Man." The author is a true lover of nature, and here and there he gives us really beautiful paragraphs on this score. Nor did he forget the famous "Indian Summer," the lakes of Maine, or the rolling prairies. On pages 352-354 is a glowing tribute to Clark University and its late founder, while as a

pleasant reminder of happy experiences in the scientific world of America he adds (pp. 407-430) the lecture on "Thought and Movement," delivered by him July 10, 1899, at the Decennial Celebration of Clark University, the invitation to take part in which was the cause of his visit to America, where he remained several months, and, hence, more or less, the cause also of the present book.

Altogether this volume is one of the best studies of America from a foreigner we have ever had, and a comparison with De Tocqueville at once suggests itself. It comes opportunely too; as the gift of a true friend of America and of mankind, and the reviewer is glad to welcome, in these days of "Anglo-Saxon infallibility," the words of one of another who fears not to declare (p. 304): "For the love of humanity we must combat the fatalist doctrine that admits a congenital difference between the aptitudes of the Latin and the Saxon peoples. All depends on education." ALEX. F. CHAMBERLAIN.

La Vraie Mémoire Affective, by M. MANXIONE. Revue philosophique, Février, 1901.

In his discussion of this question, the author admits the existence of an affective memory which is in no way like the memories of the different senses.

All sensations are to a certain degree affective, and revived sensations or images possess an affective quality in some degree. In the restored as in the original sensation, however, the feeling is with and in the sensation of the image. The vividness of the revived affection does not depend upon the general affective memory, but upon the affective capacity of the sense involved, and upon the intensity of the image brought into consciousness. To one whose auditory sense is dominant, the memory of a discordant or harmonious voice presents the same painful or agreeable characteristics as the sensation itself, but in this connection there is no distinctive affective memory.

This conclusion is supported by the *à priori* theory of Herbart in regard to the origin of feeling in connection with the action of sensations upon one another. It is also in accordance with a purely physiological theory which regards pleasure as the effect (or subjective concomitant) of a regular and harmonious rhythm of some local activity, increasing in proportion to the energy brought into play, while pain is the effect (or subjective concomitant) of an irregular and broken rhythm of such an activity, increasing with the violence and above all, with the multiplicity of the arrests. In the revived sensation, the same harmonious or broken rhythm may be reproduced though with less energy than in the original state, and from this the same pleasure or pain, more or less attentuated, may be experienced.

The feelings may often be regarded as resultants of the play of ideas, while the emotions instead of having an intellectual origin may often be traced to physiological or physical causes.

The feeling of pleasure may be traced to the facile and harmonious rhythm of a local energy which is expended without obstacles, while pain is due to the arrests which such an energy suffers.

In the reproduction of ideas, the feeling of pleasure, or the opposite, is only reproduced when the physiological conditions are about the same, and then the emotion is newly aroused. Yet, the author does not deny the existence of a certain kind of affective memory. There may be a tendency of the physiological movements accompanying the first feeling or emotion to repeat themselves under similar conditions, *i. e.*, in connection with the restoration of old sensations, in which case an affective memory comes into play which may be likened to the motor memory, but is in no way similar to the auditory or visual memories.

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The author differs distinctly from Ribot regarding the affective memory, and claims that he has the majority of psychologists on his side.

The argument is so rich in illustration that the reader is in danger of being led away from the main point to the consideration of side issues. This is noticeably true in the discussion of the characteristics of the rhythm of the physical organism which is supposed to determine more or less directly the different affective states.

Upon the whole we should say that the author has been more successful than M. Pillon in meeting the experience of the majority of psychologists. MARGARET K. SMITH.

Individuality and the Moral Aim in American Education, by H. THISELTON MARK. Longmans, Green and Co., New York, 1901. pp. 298.

This is the Gilchrist report presented to Victoria University and dedicated to the Hon. William T. Harris. The writer made a flying visit to this country, and is a rapid and experienced writer on educational topics. His book contains a great deal of information, often going into details. The first part treats of individuality in organization, classifying, collective teaching, discipline, and in the teacher and the child. The second part describes the moral aim in relation to individuality as seen in the kindergarten, in the relations between home and school, the philanthropic spirit and the educational press. There is almost nothing in the work new to American teachers to whom its chief interest will be to see how current questions, methods, etc., impress a foreigner, who gathered up an amazing deal of matter on a flying trip. His material, it must be said, is not well organized, and especially the long appendix is little more than chaotic notes.

The History and Pedagogy of American Student Societies, by HENRY D. SHELDON. D. Appleton and Co., New York, 1901. pp. 366.

This is a dissertation submitted to the Faculty of Clark University in partial fulfillment of the requirements for the degree of Doctor of Philosophy. This very important publication is the first attempt to coordinate the many partial histories of mediæval, German, French, English and American student life, including athletics, fraternities, self-government, college papers, societies for special purposes, religious organizations, class, etc. The natural history of adolescence finds here one of its richest quarries. Pedagogy will here find an enlargement of its realm, and the general reader will find it a work of such novelty and interest that he is very likely to peruse it to the end. A select and critical bibliography of forty-four pages, 318 titles, is appended, and there is a convenient and adequate index and table of contents.

Dr. Harris's introduction is partial and unsatisfactory. He conceives that the book deals with the reactions of students against the work and rules of institutions when this is only a very small part of it all. The old doctrines of estrangement and re-enforcement seem platitudinous here, because they apply equally well to many other things. To the writer's mind, this work needs no introduction, but speaks for itself, and the editor's preface here seems like a dim voice from another realm.

An Ideal School; or, Looking Forward, by PRESTON W. SEARCH. D. Appleton and Co., New York, 1901. pp. 357.

The author took a year off from his regular work, and after an experience unusually varied and mature has here attempted to put down what seem to him the ideals most worth striving toward, especially in elementary education. He describes the losses of the school in bad

methods, time and health, its ethical basis, municipal difficulties, the function of the teacher, the scope of the school, course of study, the child's opportunity traced through the different grades, and the applicability to each of the methods he advocates. Many plans, schedules and tables add to the value of the book. In elementary grades, Superintendent Search is as pre-eminent an apostle of individuality as President Eliot, and in a sense the two are tunneling the American system of education, one from above downward, and the other from below upward.

One of the extraordinary features of this book is the preface by the editor, Commissioner William T. Harris, to whom, we are told, is due the long delay in the appearance of this volume. Those who read the preface will infer that in the editor's opinion there is nothing to commend in the book; if its recommendations were carried out it would produce a revolution, and that it belongs to the ninety-five per cent. of criticisms by reformers of whom the editor evidently has increased repugnance. He has given a long list of changes that "reformers" want, and although he says "it is well to enter upon the reading of books of educational reform," he adds that this should be supplemented by the study of the history of education as a sanative and corrective. We suggest to the many readers such a book is sure to have, who share this disquietude of mind, that they read the editor's preface both before and after perusing the book, and we are firmly convinced that with this disinfectant the microbe of reform can do no harm.

Source Book of the History of Education for the Greek and Roman Period, by PAUL MONROE. The Macmillan Co., New York, 1901. pp. 515.

Old Greek education is illustrated by selections from Plutarch, Thucydides and Plato; education of women from Xenophon; the new Greek education from the Clouds, Isocrates and the Republic; the Greek theorists by extracts from the Cyropædia; Aristotle, Gregory, Cicero, Suetonius, Plautus, Tacitus, Nepos, Aurelius, Horace, Martial, Seneca, Pliny, Juvenal, and Quintilian. It is a very convenient book, and will be used wherever the history of education is taught.

Die Mädchenhochschulen in Amerika, von JOHANNES ZIEGLER. E. F. Thienemann, Gotha, 1901. pp. 66.

The writer has familiarized himself with the literature and the methods and ideals of colleges for women in America. Some of them are discussed individually. The writer has evidently small sympathy with the culture ideals of the modern woman in this country.

Die höhere Schullaufbahn in Preussen statistisch beleuchtet, von H. WERMBTER. E. Kannengiesser, Schalke, 1901. pp. 66.

The age at which Prussian teachers present themselves for the first professional examination is studied statistically together with the time previously spent in preparation. How long they wait for appointment; the average length of service; the salary, etc.,—all these topics are concisely presented in a way that gives a very good picture of the career of the higher teachers in Prussia.

Die zehn Gebote des Lehrers, von KARL MOSER. Conrad Kloss, Hamburg, 1891. pp. 132.

These ten commands to the teacher are: (1) Pray to nature and love children more than self; (2) teach so that the pupil always loves your instruction; (3) keep the body as healthful, strong and dexterous as the ideal of nature demands; (4) do the same for the soul; (5) avoid abstract language forms; (6) make the child's thought clear and sharp; (7 and 8) select the right material and the right form of instruction,

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this considered at length with relation to Bible history, reading and other branches; (9) have much change; and (10) utilize the executive faculties.

Der Kampf um das humanistische Gymnasium, von OTTO KAEMMEL. Fr. Wilh. Grunow, Leipzig, 1901. pp. 96.

This plea for a truly humanistic gymnasium is directed against false idealism; the claim of practical studies; and gives the reader a good idea of the point of view of a typical, vigorous, but conservative gymnasial rector.

The Teaching of Latin and Greek in the Secondary School, by CHARLES E. BENNETT and GEORGE P. BRISTOL. Longmans, Green and Co., New York, 1901. pp. 336.

The most remarkable thing about this book is the plea that the chief advantage of Latin is gained for students of average ability not too dry or too dull, who do not go far enough in their study of it to read it readily enough to understand it without translating. No topic, save algebra, is studied so much in secondary schools. Formerly it was pursued for its own sake, and that the student might have access to the great masters in the original, but the chief advantage here claimed is that it is a direct help to English. Our own belief is the exact reverse, that some part of the generally deplored bad English of our high schools is due to the smattering of Latin, and can be identified as translation English.

An Inquiry into the Teaching of Addition and Subtraction, by ALBERT DUNCAN YOCUM. Avil Printing Co., Philadelphia, 1901. pp. 92.

The writer has made an interesting effort to determine the mathematical contents of children's minds on entering school. Although 18 per cent. could not tell how many hands they had, 48 per cent. did not know the number of fingers on one hand, and 23 per cent. did not know the number of legs a horse had. We have no space to adequately characterize this interesting and important study, which is based essentially on the genetic method. Suffice it to say that it is a distinct and valuable addition to our knowledge, and is rich in methodic suggestions.

Die moderne Geschichts-Unterricht, von KARL LORENZ. R. Oldenbourg, München, 1900. pp. 188.

In the theoretical part, the writer discusses the point of view of modern historical instruction, and then passes to the practical part in which he considers the material to be selected from antiquity, middle ages, modern times, the tests of the modern historical view, and the burning questions of the present—social, religious, and national.

Die Entwickelung der geographischen Lehrmethoden im XVIII und XIX Jahrhundert, von CHRISTIAN GRUBER. R. Oldenbourg, München, 1900. pp. 253.

The first part treats of geography in the eighteenth century; the second in the nineteenth; and the third undertakes to state the prospects. School geographies are declared too much based on theory, and it is urged that a different position should be assigned to the subject, and it must be free from useless ballast. It begins in Heimatkunde and excursions. It should be more closely connected with geology and with economic charts, and the genetic treatment is strongly advocated.

Methodik des geographischen Unterrichts in der Volksschule, von ERNST HUPFER. Dürr, Leipzig, 1901. pp. 97.

The selection of material, its order, point of departure always Hei-

matkunde, the method first by object lesson, then systematic, and lastly application, the use of aids, the culture value, and finally the history of geography in the Volksschule are discussed.

Report on Geography, by H. S. TARBELL, F. F. MURDOCK, and L. P. NASH. New England Association of School Superintendents, November 15, 1901. Providence, 1901. pp. 66.

This report, we are told, was evoked by an address of Dr. G. Stanley Hall before the Association a year ago, and is at least especially adapted to meet his objections. It discusses what geography is, its value, aims, the old and the new, whether it is a science, its scope and limitations, relation to other subjects, and with a general syllabus of work for a few grades, and a list of reference books at the end. It is a valuable contribution to a subject now attracting great attention, but is essentially conservative.

The Paidologist. Cheltenham, England. Vol. III, No. 3, Nov., 1901.

Earl Barnes describes the contribution of C. H. Lake, born in London in 1837, as a "forgotten student of child study." Dr. Spalding's report as Superintendent of Schools in Passaic, New Jersey, on a systematic plan of child study, is reproduced in fifteen pages. Miss Louch publishes a fascinating questionnaire study of untruthfulness in children, generously reminding the reader that from the standpoint of absolute truth, our own vaunted veracity must appear but as the shadow of substance.

Die Psychologie des Kindes und die Schule, von BENNO ERDMANN. Fr. Cohen, Bonn, 1901. pp. 51.

In this lecture the author attempts to briefly describe child study in Europe and America. From his Herbartian standpoint, however, he finds little in it for school or science. While he apparently knows or at least names much of the best literature, his discussion is too brief to have merit.

The Play of Man, by KARL GROOS. Translated with the author's co-operation by Elizabeth L. Baldwin, with a preface by J. Mark Baldwin. D. Appleton and Co., New York, 1901. pp. 412.

This appears in every way to be an admirable translation of a book extremely well worth translating. Professor Baldwin in the preface announces that all his main suggestions to Professor Groos in his preface to the earlier volume "The Play of Animals" have been accepted and used by the author in this volume, a notable thing about it being the modifications of its criteria. The recommendations of Professor Baldwin's dictionary have also been incorporated. Thus, the psychological world is slowly coming to a full recognition of the inestimable value of the work of this great anticipator, suggester, and recommender.

Die anormalen Kinder und erziehliche Behandlung in Haus und Schule, von JEAN DEMOOR. O. Bonde, Altenburg, 1901. pp. 292.

This is one of the most valuable works published in the new international pedagogical library edited by Chr. Ufer. The problem of special training for abnormal children and its scientific basis is first discussed. The second book treats of the differences between the normal and abnormal child; the third of the methods of treating children who fall behind; the fourth gives a rationale method. The volume concludes with a valuable bibliography.

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The Boy Problem. A Study in Social Pedagogy, by WILLIAM BYRON FORBUSH. Introduction by G. Stanley Hall. Second Edition. The Pilgrim Press, Boston, 1901. pp. 194.

The Mind of a Child, by ENNIS RICHMOND. Longmans, Green and Co., New York, 1901. pp. 176.

The author has written books on childhood before this, and deplores that we seem drifting from the subject of children to the child. He thinks that in modern methods of classifying and dissecting, we are losing sight of the most important side of childhood, although it is not plain precisely what this is. He is impressed by the solemn responsibilities of parenthood and is sure that morally and spiritually our methods might be improved. His book has no index; he refers to almost no literature, but through eleven headless chapters, develops a very wholesome but rather common-place and hortatory plea for avoiding cram, recognizing nature, health, etc.

Über die Ursache des Alters, von M. MUEHLMANN. J. F. Bergmann, Wiesbaden, 1900. pp. 195.

To Girls. A Budget of Letters, by HELOISE E. HERSEY. Small, Maynard and Co., Boston, 1901. pp. 247.

This book has grown from long acquaintance and many talks with American girls by an experienced and very successful teacher. They are written with the effort to give girls some light in the perplexity they now feel. One type addressed is the girl who has decided not to go to college but only to the better sort of boarding school; the others are to college girls. The topics are grouped under the captions of education, social relations, personal conduct.

Our Baby's Journal, No. 1 Hope, by "We Two," M. R. and F. M. KERR. Edgewood Press, New Haven, Conn., 1901. pp. 175.

This book of notes by a father and mother is properly dedicated to all home makers and home lovers with a sweet sense of fellowship in high and holy service. The notes are to a great extent practical, but show close observation, and cannot fail to interest all parents who have children of this age. The notes are continued to the age of five.

Die Kunst im Leben des Kindes. E. A. SEEMANN, Leipzig, 1901. pp. 136.

This is a catalogue of an exposition committee to report on wall decorations for school and house, on children's picture books, and on children's drawings, a few of which are reproduced.

Kids of Many Colors, by GRACE D. BOYLAN and IKE MORGAN. Jamieson-Higgins Co., Chicago, 1901. pp. 156.

This is a volume of poems, every page of which is illustrated in brilliant colors symbolizing child life among more than twenty different races, with their lullabies and mother songs.

Die christliche Wahrheitsgewissheit ihr letzter Grund und ihre Entstehung, von L. IHMELS. A. Deichert, Leipzig, 1901. pp. 344.

This is a timely and important treatise; first on the essence of certainty from Stoics down; its peculiar meaning in the church; how Luther, the early pietists, Franke and Hermann regarded it; the objects of self deception; faith and natural knowledge; faith as certainty of the truth of scripture, etc.

The Destruction of Ancient Rome. A Sketch of the History of the Monuments, by RODOLFO LANCIANI. The Macmillan Co., New York, 1901. pp. 279.

This is a masterly work by the chief authority in this field, who

here sums up his researches in regard to the fate of the buildings and master-pieces of art in ancient Rome.

The Rational Speller, by FRANK J. DIAMOND. The Macmillan Co., New York, 1901. pp. 236.

The words here are classified upon the basis of similarity of form and sound, and are arranged by grades.

The McBride Literature and Art Books, by B. ELLEN BURKE. Books 1-2-3, pp. 108, 124, 216. Manual for Teachers. Book 1, pp. 83. D. H. McBride and Co., New York, 1900-1901.

Perhaps the chief feature of this series of literature and art books is that the printed word is not explained or illustrated by a picture. The latter are independent of the text and tell their own story, each furnishing material for several reading and language lessons. On the whole the literary selections, although we believe they might be greatly improved, seem fairly good.

The Stars in Song and Legend, by JERMAIN G. PORTER. Ginn and Co., Boston, 1901. pp. 129.

The Court of King Arthur, by WILLIAM H. FROST. Charles Scribner's Sons, New York, 1901. pp. 302.

An attractive attempt to state again the story already so well told by Charles Morris, Farrington, Bullfinch and others.

Italian Sculpture of the Renaissance, by L. J. FREEMAN. The Macmillan Co., New York, 1901. pp. 212.

After twenty pages on the enjoyment of sculpture, the characteristics of the early Renaissance are described, with special chapters on The Origins, the Pisani; Jacobo della Quercia; Ghiberti; Donatello; Luca della Robbia; the minor sculptors in marble and the bronze workers. In the later Renaissance, treated in part two, the two Sansovini; Giovanni da Bologna; Benvenuto Cellini; Michelangelo and sculpture outside of Tuscany. Over forty full page photographic illustrations are inserted, and a valuable bibliograpy is appended.

The Chinese Boy and Girl, by ISAAC TAYLOR HEADLAND. Fleming H. Revell Co., New York, 1901. pp. 176.

This is eminently a holiday book, and its author is connected with the Peking University. The margins are in brown and blue tinted decorations, and nearly every page has one or more illustrations, some of which are photographs of Chinese paintings.

A History of the Orient and Greece, by GEORGE WILLIS BOTSFORD. The Macmillan Co., New York, 1901. pp. 383.

This is a very interesting book copiously illustrated with photographs, views, and plans from both ancient and modern Greece, with convenient marginal headings, chronological table, questions, bibliography and index.

The Art of Teaching, by EMERSON E. WHITE. American Book Co., New York, 1901. pp. 306.

This veteran author is here at his best, and although we cannot use the hyperbolic phrases of the book notice sent already printed for insertion, we can give the volume hearty commendation. Although we differ rather widely from many of his methods and deem them sometimes antiquated or mechanical, there is everywhere such seriousness of purpose, such familiarity with the inner work of class rooms, and such a sincere desire to utilize what is new while giving up nothing of the old, that the work is sure to stimulate and instruct every reader.

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A Topical Discussion of Geography, by W. C. DOUB. The Macmillan Co., New York, 1901. pp. 57.

The work of each grade is briefly described, but nearly all should be placed in the seventh and eighth grades. All the references are to Tarr and McMurry.

Time Table of Modern History A. D. 400-1870, by M. MORISON. The Macmillan Co., New York, 1901.

This is a magnificent piece of work, and should be a part of the apparatus of every high school and college where history is taught. It is the method of parallel columns, with dates every ten or for the last four hundred years, five years; with convenient lists of emperors, kings, sultans, and popes; a valuable two page general chart of ancient and modern history; a copious index and nine colored, historical maps.

The First Book of Moses called Genesis. Edited by A. H. Sayce. J. M. Dent and Co., London, 1901. pp. 170.

This forefruit is the promise of a very attractive and popular series. Its standpoint is represented by a statement of the editor in the introduction that "recent archæological research has thus shown that there is no reason why the Pentateuch should not be substantially a work of the age, to which tradition assigns it. Still less reason is there for holding that the narratives it contains are not historically true," although like most histories, it is a compilation bearing the stamp of individual authorship and of subordination of the material to the point of view.

Mutterschaft und geistige Arbeit, von ADELE GERHARD UND HELENE SIMON. Georg Reimer, Berlin, 1901. pp. 333.

The first part discusses the physical nature of woman and the relations of the mother's calling to mental work, which must be restricted in the interests of maternity. Motherhood is discussed in relation to the theater, music, plastic art, poetry, science, essays and journalism. According to the author's census, fifty-one per cent. of those who attained eminence in the above lines are unmarried, but the conclusion is that mental work does not injure either fertility or nursing. The basis was 420 experts as compared with 407 mothers. The names of the experts are appended.

Life and How to Live It, by AURETTA ROYS ALDRICH. Drexel Biddle, Philadelphia, 1901. pp. 186.

Life can be reconstructed; the mistakes and diseases of civilization remedied; and we can thus revert to primitive, unconscious simplicity by regulating all our rhythms, by proper hygiene and exercise. The most striking things about the book are the full-page illustrations of attitudes and the absurd and very ugly faces the author thinks necessary in order to free the different parts of the body, or, in her phraseology, to liberate them.

The Education of Teachers, by W. H. PAYNE. B. F. Johnson Publishing Co., Richmond, 1901. pp. 272.

The above is the title of the first essay. The others are entitled wholesome culture, the policy of benevolence, teaching a spiritual not a mechanical art, teachers to be educated not trained, education according to nature, theory of educational values, equity in examinations, the universal vocation and the theory of life.

A Manual of School Hygiene, by EDWARD W. HOPE AND EDGAR A. BROWNE. University Press, Cambridge, 1901. pp. 207.

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